
# ANALYSIS OF AIR FORCE JUNIOR AIRCRAFT MAINTENANCE OFFICER LEADERSHIP DEVELOPMENT

THESIS

Michael A. Morabito, Captain, USAF

AFIT/GLM/LSB/85S-54



DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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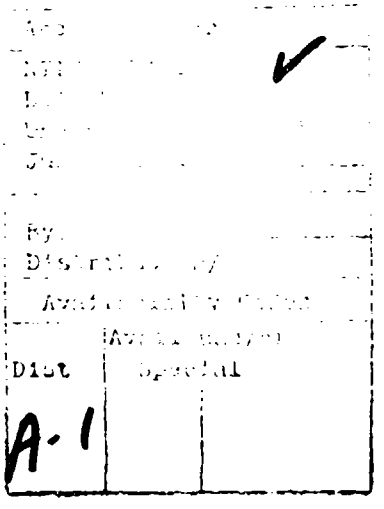


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THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
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Requirements for the Degree of
Master of Science in Logistics Management

Michael A. Morabito, B.S.
Captain, USAF

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## Preface

This research examined the topic of leadership development among junior aircraft maintenance officers. An attempt was made to identify specific activities that young officers use to develop their personal leadership skills. Additionally, the relationships between overall leadership development and the following variables were examined: consulting and delegating behavior of the junior officer's immediate superior, recognizing and rewarding behavior of the superior, developing behavior of the superior, major command assignment, organizational level of assignment, prior enlisted experience, commissioning source, age, rank, and sex. Finally, this research measured the importance the junior officers place on leadership development methods available to them in the Air Force, and collected suggestions on ways to change or improve them.

I express gratitude to my thesis advisor Captain Benjamin L. Dilla for his enthusiasm and remarkable ability to give just the right guidance at precisely the right moment. I thank Dr. Gary A. Yukl of the State University of New York for his assistance and permission to use the Managerial Behavior Survey in this research.

I owe a lasting debt of gratitude to my parents. I thank my father, Lt Col Arthur C. Morabito, for his constant example of leadership and integrity; and my mother, Wilma R. Morabito, for her strength, love, and cheer during the joy and crisis that life brings.

Finally, a very special thanks to my lovely wife Pam and little Lisa for their love, patience, and encouragement during my AFIT studies.

— Michael A. Morabito

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## Abstract

A random sample of 320 U.S. Air Force aircraft maintenance officers (AMOs) was surveyed using the updated version of Yukl's Managerial Behavior Survey (MBS), to measure leader behavior of the AMO's superior officer, and other scales focusing on the AMO's perception of his/her own leadership development. Specific development methods used by AMOs and the perceived importance of each were explored. Furthermore, suggestions were collected on ways to improve development methods available to them in the Air Force. Leadership development was correlated with the superior's leader behavior and with demographic and organizational variables. The personal factor of rank was found to be associated with leadership development. Participation in eight of nineteen leadership activities correlated significantly with the degree of importance the AMO placed on the activities. Analysis of the MBS results indicated certain categories of superior officer leader behavior were significantly associated with the perceived leadership development of the AMO. Comments on improvements to the development methods available to junior AMOs were grouped and examined for common themes.

# ANALYSIS OF AIR FORCE JUNIOR AIRCRAFT MAINTENANCE OFFICER LEADERSHIP DEVELOPMENT

## I. Introduction

### Chapter Overview

This chapter provides a background for the research topic of leadership development of junior aircraft maintenance officers in the United States Air Force. It presents the general issue of this research, the specific problem statement, overall research objectives, and the investigative questions. Additionally, this chapter defines the scope and limitations of the research effort, and defines the terms leadership, leadership development, and leader behavior.

### General Issue

Leadership is a constant military concern. Because of this, the Air Force Institute of Technology and the Air Force Leadership and Management Development Center (LMDC) have shown interest in this research effort to increase the knowledge base concerning the leadership development of junior Air Force aircraft maintenance officers (AMOs).

## Specific Problem

This research effort will attempt to determine the leadership development activities of junior Air Force AMOs and whether or not differences exist between AMOs serving in Tactical Air Command, Strategic Air Command, and Military Airlift Command and squadron or staff assignment within each command. Additionally, this research will attempt to determine if a relationship exists between the leadership development of junior AMOs and three specific categories of their superior's leader behavior.

## Research Objectives

The overall objective of this research was to collect sufficient data from a population of junior Air Force AMOs to identify the methods of leadership development and their assessment of their immediate superior's leader behavior. In order to accomplish this primary objective, the specific research objectives of this study were to determine:

1. The relationship of personal background factors with the leadership development of junior Air Force AMOs.

2. Leadership development methods or activities used by junior AMOs.

3. Extent of participation in leadership development methods or activities.

4. Perceptions of AMOs concerning the relative importance of the leadership development methods or activities.

5. The relationship between the immediate superior's leader behavior and the junior AMO's leadership development.

6. Possible methods for improving the leadership development of junior AMOs.

Investigative Questions

In order to accomplish the research objectives, data were collected to answer the following questions:

1. What is the relationship between personal background factors and the extent of leadership development? Factors examined in order to characterize this sample of officers include:

a. major command assignment

b. type of squadron or staff level assignment

c. prior enlisted experience

d. rank

e. commissioning source

f. sex

g. age

Although there is no prior basis for predicting relationships between the demographic items and leadership

development, it is important to examine these variables for any relationships that might exist.

2. What is the extent of involvement in various leadership development activities among junior AMOs?

3. What is the perceived importance of leadership development methods or activities used by or available to junior AMOs?

4. What is the relationship between the perceived importance of leadership development activities and participation in them by AMOs?

5. What is the relationship between the superior's leader behavior and the extent of junior AMO leadership development?

a. A positive relationship is hypothesized between the junior AMO's leadership development and the leader's consulting and delegating behavior.

b. A positive relationship is hypothesized between the junior AMO's leadership development and the leader's recognizing and rewarding behavior.

c. A positive relationship is hypothesized between the junior AMO's leadership development and the leader's developing behavior.

6. What are junior AMO suggestions for improving or changing the methods of leadership development?

## Limitations

This research contains a few limitations which must be considered when evaluating the results and conclusions. First, the study questioned only company grade aircraft maintenance officers; furthermore, these officers were serving in only the three largest major commands: Tactical Air Command (TAC), Strategic Air Command (SAC), and Military Airlift Command (MAC). Also, due to time constraints, a decision was made to limit the sample to only those officers assigned to Continental United States bases within those commands. While this sample was felt to be representative of all USAF aircraft maintenance officers, generalization beyond the specific population surveyed will not be made.

## Definitions

Three specific definitions are presented in order to provide a common conceptual base for the reader.

1. Leadership is the dynamic, goal-directed process of influence between the leader and follower, and the interaction of each to the situation (Yukl, 1981:1-5; Dilla, January 1985).

2. Leadership Development is defined as any method or activity used by the individual to enhance personal ability to influence subordinates to achieve organizational goals.

3. Leader Behavior is defined as the set of behaviors from the taxonomy developed by Dr. Gary A. Yukl of the Business School, State University of New York at Albany. Behaviors included are shown in Figure 1 (Yukl, 1981:120-128; Yukl, 1985).

Scope

At the outset of this chapter, leadership was deemed to be a constant military concern. Typically, this concern falls within two fairly distinct areas: the identification of individuals with leadership potential, and the subsequent training and development of the individuals for more effective management of organizations (Hunt and Larson, 1979:23). This leadership research effort focuses on the latter area.

First, this thesis evaluates leadership development in light of the immediate superior's leader behavior and the junior AMO's major command assignment, type of squadron or staff level assignment, prior enlisted experience, rank, commissioning source, sex, and age. Leadership development is measured using a single item which asks the respondent to rate himself on a five-point Likert scale. The leader behavior of the junior AMO's superior is measured using the Yukl taxonomy of leader behavior.

Second, this research effort collects opinions of junior aircraft maintenance officers concerning the

1. INFORMING: The extent to which the leader disseminates relevant information to subordinates and informs them about decisions, plans, and events that affect their work.

2. CONSULTING AND DELEGATING: The extent to which the leader encourages subordinates to participate in making decisions, and delegates authority and responsibility to individual subordinates.

3. PLANNING AND ORGANIZING: The extent to which the leader determines the work unit's objectives and strategies, and determines how to use personnel and resources efficiently to accomplish work unit objectives.

4. PROBLEM SOLVING AND CRISIS MANAGEMENT: The extent to which the leader identifies serious work-related problems, quickly but systematically analyzes the cause, then acts decisively to deal with the problem or crisis.

5. CLARIFYING ROLES AND OBJECTIVES: The extent to which the leader establishes a clear understanding of job responsibilities, task objectives, and performance expectations for subordinates.

6. MONITORING OPERATIONS: The extent to which the leader gathers information about the operations of the work unit, and checks on the progress and quality of the work.

7. MOTIVATING TASK COMMITMENT: The extent to which the leader uses influence techniques to generate enthusiasm for the work, commitment to task objectives, and compliance with orders and requests.

8. RECOGNIZING AND REWARDING: The extent to which the leader praises effective performance by subordinates, shows appreciation for special contributions and achievements, and rewards effective performance with tangible benefits.

9. SUPPORTING: The extent to which the leader acts friendly and supportive, is patient and helpful, and shows consideration for a person's needs and feelings.

Fig. 1. Yukl Taxonomy of Leader Behavior

10. DEVELOPING: The extent to which the leader counsels a subordinate about skill deficiencies or inadequate performance, provides coaching or arranges for skill training to be provided, and provides advice and assistance in a subordinate's professional growth and career development.

11. HARMONIZING AND TEAM BUILDING: The extent to which the leader develops teamwork, cooperation, and identification with the work unit among subordinates, and facilitates the constructive resolution of conflicts and disagreements.

12. REPRESENTING: The extent to which the leader acquires necessary resources and support for the work unit, and promotes and defends its interests while serving as a spokesperson, negotiator, lobbyist, or recruiter for it.

13. INTERFACING: The extent to which the leader develops contacts and interacts with outsiders and managers of other work units to gather information, improve coordination, and discover how the work unit can adapt better to a changing environment.

Fig. 1--Continued

importance they place on the leadership development activities used by or available to them. They are also asked to reveal how much time or actual involvement they spend in each leadership development activity.

Finally, opinions of junior AMOs concerning typically suggested leadership development programs will be evaluated, and their suggestions for improving or changing the current avenues of leadership development will be solicited.

## Chapter Summary

This chapter has introduced the focus of this research effort. The general issue of the leadership development of junior Air Force aircraft maintenance officers was presented, and the specific research problem defined. Also included in this chapter are the research objectives, investigative questions, limitations, definitions, and scope. Chapter II presents a review of the literature on leadership and junior officer leadership development including major conceptual advances in both civilian and military research.

# II. Survey of Literature

> In military service we are concerned primarily with handling men, money, and materials . . . the first of these basics, the management of men in command and leadership . . . involves a continuing study of the human element in military life.
>
> — Maj Gen Aubrey S. Newman, USA (Ret.)

## Chapter Overview

This chapter is a review of applicable literature on leadership development including both civilian pioneering research and military studies with particular emphasis on the evolution of the professional development of junior officers. First, civilian literature describing major conceptual advances in leadership development and effectiveness is presented. Then, United States Air Force (USAF) and Army studies are reviewed, showing a general evolution of thought and recommending possible development avenues for the junior officer. Emphasis is placed on specific USAF studies of junior officer development over the past twelve years. For a more general review of USAF pre- and post-commissioning leadership development programs, the reader is referred to the 1980 AFIT thesis by Captains Komar and Wise where a relatively concise review is presented in Chapter III (Komar and Wise, 1980).

## Civilian Studies

The subject of leadership has been addressed by many scholars from ancient times to the present. Indeed, many studies have been reported, especially since the turn of the century. This review will consider only the major conceptual advances specifically related to this research effort. For a complete discussion and history of leadership research, the reader is referred to Stogdill's Handbook of Leadership (Bass, 1981).

Ohio State University Studies. No review of leadership research would be complete without acknowledging the progress and contributions of the Ohio State University studies in leadership and leader behavior. The leadership studies started in the mid-1940s as a basic research program to develop a methodology for the study of leader behavior (Stogdill and Shartle, 1955:vii).

> Practical aims were also kept in mind . . . it was hoped that the research might produce data which would eventually be of value in the selection, training and assignment of persons for leadership roles. (Stogdill and Shartle, 1955:vii)

Initial studies conducted by Ohio State included leadership in organizations such as wholesale cooperative associations, manufacturing plants, public schools, Air Force bomber aircrew squadrons, and Navy ship and shore bases (Stogdill and Shartle, 1955:vii-ix). During these studies, a research instrument, the Leader Behavior

Description Questionnaire (LBDQ) was developed and refined. Indeed, "the focus of much of the research was the identification of leadership behavior that is instrumental for the attainment of group and organizational goals" (Yukl, 1981:105). As a result of extensive factor analysis using many different types of leader behavior as measured by the LBDQ, two primary leader behavior categories emerged and were labeled "Initiating Structure" and "Consideration," accounting for approximately 83 percent of the total factor variance (Stogdill and Coons, 1973:51; Yukl, 1981:106). The dimension of initiating structure deals with the leader's task or goal directed behavior, whereas the consideration dimension deals with a leader's relationship directed behavior (Yukl, 1981:106).

Further studies were performed to determine the relationship between these two broad categories of behavior (and specific subcategories within each) and criteria such as leader effectiveness, subordinate absenteeism, grievance, turnover rates, and satisfaction (Yukl, 1981:108). Results of these studies are generally accepted to be mixed. In some studies, such as one concerning truck manufacturing foremen, it was found that a curvilinear relationship exists between both initiating structure and consideration and leadership effectiveness criteria. In essence, if a foreman needed to increase the task direction of his subordinates, he also needed to increase consideration--else

overall production would suffer (Yukl, 1981:108-109). In another example, subordinates were sometimes more satisfied with a leader who exhibited a high degree of initiating structure, and at other times a low degree would produce the same result (Yukl, 1981:111). In addition, the finding that subordinates are usually more satisfied with a considerate leader can hardly be seen as a significant discovery (Yukl, 1981:111).

Nevertheless, the Ohio State studies have made advances in the study of leader behavior. In addition to developing the first standard measurement of leader behavior, the initial Ohio State studies postulated that

> . . . it is probable that leader behavior is substantially related to the type of group in which the leadership occurs as well as to the person engaging in the behavior. (Stogdill and Coons, 1974:37)

Thus, the importance of factors external to the leader himself was recognized.

University of Michigan Survey Research Center Studies. Like the Ohio State studies, the University of Michigan also conducted ongoing research in leader behavior and its relationship to group effectiveness. As a result of numerous field experiments and questioning, four distinct categories were identified by two of the researchers, Bowers and Seashore. They were: support, interaction facilitation, goal emphasis, and work facilitation (Yukl, 1981:117-118). Some similarity with Ohio State can be

seen in these behavior labels, particularly support and goal emphasis. However, the University of Michigan studies are noted for one particular advance in the study of leadership. Namely,

> Bowers and Seashore were the first to emphasize the need to measure subordinate leadership behavior as well as a manager's behavior. They developed parallel sets of questionnaire scales for subordinates to use in describing the leadership behavior of their supervisor and the leadership behavior of [other subordinates in the same work unit]. (Yukl, 1981:119)

Research results using the four categories of behavior are mixed with the primary question being the role of the situation in leader behavior and group effectiveness. For instance, effective results were obtained by leaders using each of the primary leader behavior categories. No particular patterns were noted between the studies, either in the type of organization the leader operated in, or in the amount of authority he had in the organization (Yukl, 1981:119). However, as with the Ohio State studies, the importance of the situational factors surrounding the leadership problem was becoming more and more evident.

Professor Gary A. Yukl's Taxonomy of Leader Behaviors. In the late 1970s, Professor Gary A. Yukl and colleagues at the Business School of the State University of New York began another research effort to determine viable and measurable leader behavior categories

(Yukl, 1981:121). Yukl's approach emphasized the development of a leader behavior taxonomy on an "intermediate level of abstraction" which could be "applicable to a variety of measurement techniques" (Yukl, 1981:120). His taxonomy originally included nineteen separate categories of leader behavior, now reduced to thirteen, based upon research results. Furthermore, Yukl has suggested an approximate correspondence between his taxonomy (see Figure 1) and the ones developed by seven other researchers over the past thirty-one years (Yukl, 1981:121-128). Thus, Yukl in his own words is attempting to "fill a conceptual void . . . [in the] categories of leadership behavior" (Yukl, 1981:121). He states the advantage of his categorization

> . . . is that it has a larger number of more specific behavior categories than earlier [taxonomies], and it includes most behaviors found to be important in leadership research. (Yukl, 1981:128)

The actual method used to measure the behavior categories developed by Yukl is the Managerial Behavior Survey (MBS). In its present form, it is administered to a leader's subordinates or, in another version, to the leader himself. Respondents are asked specific questions about their leader's behavior or asked to rate themselves (Yukl, 1981:128). This research will use the subordinate version of the MBS to measure the behavior of the junior AMO's immediate supervisor in order to determine if

relationships exist between selected leader behavior categories and the leadership development of the junior officer.

Summary of Civilian Studies

The civilian studies on leadership highlight the search for a meaningful definition and taxonomy of leader behavior. The underlying assumption in each of the major conceptual advances is clear--an individual must behave like a leader in order to be called one. So research commenced to find a methodology that would accurately determine the categories of leader behavior which resulted in effectiveness. Researchers at the Ohio State University pioneered this effort, while concurrent studies were performed at the University of Michigan. Both sets of studies resulted in fundamental advances in the conceptual development of leader behavior. The Ohio State studies focused on two basic leader behavior categories; the University of Michigan derived four. Both studies found evidence of external factors, such as the situation, which affect the total leadership problem. The University of Michigan studies were the first to suggest the follower's behavior also has an impact on the leadership problem. Finally, the Yukl studies attempted to integrate the concepts of leader behavior by developing a more complete taxonomy of leader behavior consisting of thirteen categories.

## Military Studies

The literature on military leadership development was obtained following a search of the Defense Technical Information Center, the Defense Logistics Studies Information Exchange, and the Air University Library System. Little information was found concerning the leadership development of aircraft maintenance officers specifically; however, numerous studies reflecting a continuing concern for junior officer development were obtained primarily from Air Force researchers. Selected Army studies were also obtained as a result of the literature search, although again none dealt specifically with aircraft maintenance officers. Even though the Navy has typically been in the forefront concerning leadership study, especially with the early work performed at the Ohio State University, no current research was found dealing specifically with junior officer leadership development. The following studies were arranged according to branch of service, in chronological order.

## Air Force Studies

Air Force research dealing with the leadership development of junior officers has a long history. It should be noted that in many of the studies, the terms "leadership development," "management development," "officer development," and "professional development" are

used somewhat interchangeably. While subtle distinctions could be addressed, consider this definition of leadership development: any method, program, or activity used to enhance the junior officer's ability to influence subordinates to achieve organizational goals. The studies both individually and collectively point to an overall perception that USAF junior officers are lacking necessary skills required for total effectiveness in achieving these goals. Therefore, each of these terms will be roughly equated to each other throughout the review of the literature.

Lt Col George D. Robinson (1974). Colonel Robinson's report to the faculty of the Air War College was the earliest study reviewed. In Schooling the Middle Manager, he presents a classic comparison of industry management development programs to the ones used by the Air Force. Colonel Robinson determined that

> . . . some of the areas in which the Air Force can improve its efforts based upon industry's experience [are]: structure of management development programs, empnasis on on-the-job methods, use of multiple management boards and Junior Officer Councils, and formal training programs. (Robinson, 1974:84)

He notes that too much of the Air Force's formal program comes too late in the typical officer's career, and that informal base-level programs are too dependent on supervisor initiative and the junior officers' desire or willingness to pursue individual self-development. Furthermore,

the value and consistency of self-development programs are difficult to measure (Robinson, 1974:25-83).

Maj Leonard J. Dobias (1974). In An Analysis of Management Development in the Air Force, Major Dobias studied officer development in order "to recommend specific policy changes to the Air Force which will improve management development of the Supply Officer" (Dobias, 1974:93). The author presents nine distinct recommendations which, he believes, will solve at least some of the problems of the current Air Force system. The primary suggestion was that the Air Force develop a single, authoritative source for guidance and direction in administering management development programs. Furthermore, Major Dobias suggested the development of a training course similar to the enlisted On-the-Job Training (OJT) Program that should be geared toward systematically developing the managerial proficiency of officers (Dobias, 1974:86-97).

Lt Col Hubert C. Place (1978). Colonel Place also studied the management development of Air Force officers in his report The Commander: Enhanced Leadership Effectiveness Through Education and Training. In his work, Colonel Place determined the "USAF is not providing the squadron [or] detachment commander with an appropriate developmental program. . ." (Place, 1978:iii). Specifically, he notes that other than Air Force Institute of Technology

management degree programs, Air University Professional Military Education programs, and selected specialized courses by the Leadership and Management Development Center (LMDC), the "officer receives what appears to be little formal leadership and management development within any chosen career field" (Place, 1978:42). The author recommends changes to precommissioning curricula to include more emphasis on "behavior science aspects of leadership and management" (Place, 1978:45). Moreover, Colonel Place suggests seven pitfalls to avoid when designing an overall leadership development program:

1. Lack of support by top management.
2. Failure to recognize strengths and weaknesses of selected individuals.
3. Failure to tailor program to individual needs of trainee.
4. Failure to tailor program to the position individual is to assume.
5. Program in deference to organizational policies, practices, and procedures.
6. Failure to integrate behavioral science approach into program.
7. Trainee lacks desire or resists training. (Place, 1978:81)

Col Wayne L. Gosnell (1980). In Colonel Gosnell's report, The Air Force is Making Occupationalists of Its Junior Officers, he states:

> The precommissioning programs can at best provide only a basic knowledge of [leadership, military history, and officership]: they can only plant the seeds from which professional, dedicated, competent military officers develop. The feeding and nurturing which allows this development to take place must be done during the first few years of active military service. (Gosnell, 1980:1-2)

Further, instead of providing this essential development, Colonel Gosnell contends that the Air Force is emphasizing technical development and proficiency. As support for his thesis, he surveyed the Air War College (AWC) class of 1980 and concluded that even though officer development is ultimately the junior officer's responsibility,

> . . . a direct connection [exists] between the degree of importance the supervisor attaches to professional self-development efforts and how many of his junior officers participate in such efforts. (Gosnell, 1980:35)

Maj Jeffrey C. Benton (1981). In his Air Command and Staff College (ACSC) report titled Promoting Leadership in the Air Force's Management Environment, Major Benton suggests that current USAF policy concerning command rotation of senior officers is causing detrimental effects on the development of subordinate officers. He states:

> The most important way to find and develop leaders is to provide the flexibility that will allow commanders at all levels to become leaders and to serve as leadership models for their subordinates. (Benton, 1981:17)

Major Benton suggests that the present USAF command rotation system of relatively short (twenty-four months or less) duration does very little to develop leadership within the command. He postulates that

> . . . after becoming efficient in performing their managerial responsibilities, commanders would have time to develop the personal relationships necessary for effective leadership--time not currently available to them. (Benton, 1981:18)

Positive results suggested by Major Benton include more opportunities for subordinate leadership development through increased decentralization of decision making, and increased mentoring.

Maj Richard H. Estes (1984). In Major Estes' report Mission Critical: The Junior Officer Senior NCO Relationship, the author suggests that inadequate junior officer leadership development is harming NCO relationships, unit cohesiveness and teamwork, and ultimately unit effectiveness (Estes, 1984:1-20). He suggests, as a possible remedy, the expansion of the Lieutenants Professional Development Program (LPDP) offered by the LMDC. Currently the program is offered only at the request of the particular base; hence, LMDC is not adequately staffed to present the seminar as a formal and regular avenue of leadership development to the junior officer (Estes, 1984:7).

AlC Michael Mansfield (1984). In Air Force Lieutenants: An Analysis of Perceptions Surveyed During the Lieutenants Professional Development Program, the author presents the LPDP as a possible alternative to remedy the junior officers', especially the lieutenants', leadership development problems. Airman First Class Mansfield states: "The data clearly indicate the need for additional training" (Mansfield, 1984:16). He continues by recommending that the program be presented at all bases

every twelve to eighteen months and that both supervisors and key subordinate NCOs "expend greater effort and energy toward working with lieutenants" (Mansfield, 1984:16). He also suggests that pre- and post-commissioning leadership training programs be reviewed. So, he implies that, based on this and previous research, the most fertile ground for further junior officer leadership development is highly dependent on supervisor and key NCO involvement with the young officer and short professional courses such as LPDP at base level (Mansfield, 1984:16).

Col Ray L. Rider and Lt Col George T. Lewis, Jr. (1984). In their seminal work, Another Nickel: A Proposal for Junior Officer Professional Military Development, the authors echo the cry that the Air Force's junior officers are rapidly turning toward occupationalism due to a tremendous void in military leadership development. However, for the first time, these authors propose a continuous, comprehensive, formal program "Another Nickel" to reverse this trend and lay a solid foundation in the early years of the officer's career. They emphatically state:

> . . . we cannot realistically expect our junior officers to simply enter the highly specialized work environment of today's Air Force, compete on a daily basis in that environment, yet search for and discover an effective program for professional development without clear guidance and support. (Rider and Lewis, 1984:77)

The authors succinctly respond to the questions "What do we need?" and "How do we do it?" In answering "what" the program should contain, the authors suggest that the blocks of instruction include readings, seminars, lectures, and films divided to complement Samuel P. Huntington's three criteria for professionalism; namely, expertise, responsibility, and corporateness (Rider and Lewis, 1984:46-52). In responding to "how" the program should be presented, the authors agree that it should be a separate program offered early in the career of the junior officer. Moreover, it should be completed as a pre-requisite to Squadron Officer School (SOS) attendance. They further conclude that it should be offered both in seminar and correspondence format, and progress should be a mandatory notation on the Officer Effectiveness Report. Colonels Rider and Lewis end their proposition by challenging other senior officers to help form a more concrete approach to "Another Nickel" (Rider and Lewis, 1984:77-113).

Summary of Air Force Studies

This review of Air Force studies concerning the development of junior officers has, in essence, come full circle in the past twelve years. From early reports, the concern expressed by senior officers concentrated on the need for development of technical and management skills

through better pre-commissioning studies. One author then suggested a junior officer OJT program.

Next, senior officers suggested that the Air Force has, in essence, gone too far in the technical training areas for its junior officers--making them more occupational instead of truly professional.

Finally, the most current thinking expresses the urgent need to return to the basics of officership and leadership. One report detailed the heart of a newly suggested formal program for junior officer development and challenged Air Force senior leaders to further shape and implement it.

Army Studies

Edgar L. Shriver and others (1980). In the authors' report Development of a Leader Training Model and System, an attempt was made to develop a "theoretical model for the training of leaders participating in Engagement Simulation exercises" (Shriver and others, 1980:1). This research resulted from perceived shortcomings in the way the U.S. Army presently conducts leader training in a tactical warfare environment where specific leader skills and group interactive processes are typically not addressed (Shriver and others, 1980:4). Thus, the U.S. Army is showing a keen interest not only in general leadership development, but also in the specific area of combat arms.

In the training model they propose, three separate types of learning processes are presented: experiential, analytic, and procedural (Shriver and others, 1980:5). Basically, these types fall into the broad categories of "learning by doing," "learning after doing," and "learning how to do" respectively. Their research demonstrates that the most successful leader training results from experiential processes. Mixed success occurred with the analytic process, and no real success resulted from the procedural learning process (Shriver and others, 1980:5-27).

Richard S. Wellins and others (1980). In this study titled Analysis of Junior Officer Training Needs, the authors conducted a comprehensive investigation for the U.S. Army's Training and Doctrine Command. Army officers, noncommissioned officers, and enlisted personnel were questioned concerning problems faced by junior officers. In addition, respondents were asked to address the ways that improvements could be made to the development and training of these junior officers. In value ratings of forty subject areas, the respondents rank-ordered these and other items in order of importance with the following results: management and training--rank 1; leadership development--rank 3; case studies in leadership--rank 26; and seminars in leadership--rank 35 (Wellins and others, 1980:23-32). The problems of junior officers that were

identified by all three categories of respondents generally fell into two areas: human relations skills, and technical skills. Indeed, the authors state:

> Many problems described by junior officers and corroborated by NCOs and enlistees were of an interpersonal nature. Establishing effective working relationships with superiors, subordinates, and enlistees was often difficult for the new lieutenant. . . . The senior officer may not take the time to supervise, guide, and correct the performance of the new lieutenant. Conversely, second lieutenants are frequently overprotected by their superiors and thus are not allowed to learn through experience. (Wellins and others, 1980:5)

Therefore, it seems that the Army also is faced with serious issues in junior officer development. Finally, the authors suggest several areas for improvement in the current training and development of junior officers including: the adoption of the Cadet Troop Leadership Training program for all cadets, training that includes performing under stress, the use of NCOs in training, and more realistic leadership training (Wellins and others, 1980:8).

Summary of Army Studies

Army studies on junior officer development in the current literature have focused on specific leadership training problems. This is especially true in the combat, or tactical training objectives of their primary development programs. For instance, one study determined that in combat arms leadership training, experiential learning

resulted in better leadership development among junior officers.

In another study, problems with working relationships between junior officers and enlistees or superiors were discovered. It recommended more realistic leadership training such as a controlled stressful condition using the knowledge and experience of NCOs to further develop the young officers' skills.

Thus, the Army studies have been primarily concerned with specific combat leadership skill development. This is an interesting contrast to the Air Force studies which have been concerned more with the overall leadership development of its junior officers.

## Chapter Summary

This chapter has provided a foundation of prior research in the area of leadership and leadership development. A theoretical framework of leader behavior measurement was presented in the civilian studies section. Specifically, the Ohio State and University of Michigan studies were reviewed and Yukl's taxonomy of leader behavior was presented. Next, military studies on leadership development were presented. Air Force and Army studies reflected an increasing concern by senior officers and other researchers for improving the leadership development of junior officers. The next chapter presents the specific methodology used in this research.

# III. Methodology

## Chapter Overview

This chapter presents the methodology used to satisfy the research objectives described in Chapter I. More specifically, it defines the research population and the sample from which the data were collected. Finally, it presents the specific survey instrument which was used to collect data and the plan for data analysis.

## Population

The research population of interest is considered to be all United States Air Force aircraft maintenance lieutenants and captains serving in the Continental United States (CONUS), in the following major commands: Tactical Air Command, Strategic Air Command, and Military Airlift Command. The population was restricted to CONUS due to the time constraints associated with mailing surveys and receiving timely responses from individuals serving overseas. This definitional limitation restricts generalization of the findings to CONUS assigned AMOs in the specific commands mentioned. No attempt should be made to generalize the results of this research to individuals outside of the specific population parameters.

According to official sources at the Air Force Manpower and Personnel Center (AFMPC), the size of the population is 730 individuals. The following breakdown by major command applies: Tactical Air Command, 342 persons; Strategic Air Command, 204 persons; and Military Airlift Command, 184 persons (Ashley, 1985).

## Sample

A simple random design was used to sample the population described above. The Personnel Survey Branch of AFMPC used internal procedures to select a sample which was sufficient to allow for a 95 percent confidence level. Discussions with survey branch officials revealed that, based upon the population size of 730, the simple random design, and the confidence criterion, the sample size should total 320 individuals (Ashley, 1985).

## Survey Instrument

A survey instrument was used to collect data in order to answer the specific investigative questions presented in Chapter I. No current, existing survey was found that could be used to answer all of the questions. Therefore, a three-part survey instrument was designed. Part I of the survey was constructed to answer investigative questions 1, 2, 3, 4, and 6. Part II was a standard survey instrument, the Managerial Behavior Survey (MBS), designed by Dr. Gary A. Yukl of the Business School, State

University of New York at Albany. Because this questionnaire measured leader behavior by using the perceptions of the subordinate, it was used to answer investigative questions 5a, b, and c. Part III was another standard instrument, the Managerial Behavior Importance Questionnaire (MBIQ), also designed by Dr. Yukl. While not used in this research, the MBIQ was included as a courtesy to Dr. Yukl for the use of his instruments.

In summary, the following attributes of each respondent were measured by the survey instrument:

1. Source of officer commissioning
2. Sex
3. Age
4. Rank
5. Major command of assignment
6. Prior enlisted experience
7. Organizational level of management
8. Perception of extent of leadership development
9. Perception of importance of leadership development activities
10. Amount of time per week devoted to leadership development activities or number of times per week leadership skills practiced
11. Perception of the superiors' leader behavior
12. Opinions regarding improvement or change in Air Force leadership development programs or activities

The survey asked for anonymous response from the sampled individuals. They were given a clear choice among mutually exclusive and collectively exhaustive categories, or asked their opinions on subjects familiar to them. All parts of the survey were pretested by a sample of company grade officers in the Graduate Maintenance Management option of the School of Systems and Logistics, Air Force Institute of Technology. Minor revisions of form and content were accomplished before mailing the final surveys. Furthermore, the MBS instrument was reviewed to insure that each item was worded so that the respondent clearly understood that he was rating his immediate superior's leader behavior. Part I of the survey instrument is included in Appendix A in its entirety. Also, a sample item from each of the thirteen behavior categories of the MBS in Part II of the survey is included. Finally, Part III is included in its entirety. All parts were professionally reproduced in identical typeset and page format and mailed to the respondents in a booklet form. Respondents were asked to complete and return an optical scanning sheet, AFIT Form 11E, "Organizational Assessment Form," and the booklet in a postage-paid return envelope. If the respondents had any comments, they were asked to write them in the booklet itself.

## Variable Classification

Table 1 summarizes the variables by survey category and item number, and classifies them by data level and/or measurement scale.

## Data Analysis Techniques

Analysis of the data provided by the survey respondents was performed using the computer support available through the Air Force Institute of Technology Data Automation Division. The Harris 800 system operating the Statistical Package for the Social Sciences (SPSS) was used to analyze the data. Both descriptive and inferential statistical subprograms of SPSS were used, including FREQUENCIES, BREAKDOWN, CROSSTABS, NONPAR CORR, RELIABILITY, and FACTOR.

Descriptive. Descriptive analysis was used to examine investigative questions 1, 2, and 3 in order to determine the AMO's personal background factors, extent of involvement in leadership development activities, and the perceived importance of the methods or activities used for leadership development. This analysis included survey items 6-24, importance of leadership development activities; items 25-31, demographics; and items 32-47, involvement in leadership development activities.

The demographic and leadership activities data were grouped and analyzed using the subprogram FREQUENCIES.

TABLE 1

VARIABLE DESCRIPTION AND CLASSIFICATION

| Survey Item Number(s) | Variable Description | Data Level |
|---|---|---|
| 1-4 | Self-Evaluation of Leadership Development | Interval (5-pt scale) |
| 5 | Immediate Superior's Leadership Effectiveness | Interval (5-pt scale) |
| 6-24 | Importance of Leadership Development Activities | Interval |
| 25-31 | Demographics | Nominal |
| 32 | Lieutenants Professional Development Program Completed | Nominal |
| 33 | SOS Completed | Nominal |
| 34 | ACSC Completed | Nominal |
| 35 | Postgraduate Degree Completed | Nominal |
| 36-47 | Involvement in Leadership Development Activities | Interval |
| 48-177 | Superior Officer's Leadership Behavior | Interval (4-pt scale) |
| 178-190 | Importance of Types of Leader Behavior | Interval |

This allowed the researcher to obtain a clear picture of the respondents, the leadership development activities they use, and the extent of their involvement in the activities.

Additionally, the demographic categories were used in the subprogram BREAKDOWN to determine their relationships to extent of leadership development. BREAKDOWN, which includes a one-way ANOVA, was a useful and valid procedure since the dependent scale variable (leadership development) was measured at the interval level, and each independent variable (demographics) was measured at the nominal level.

Inferential. This analysis was performed in order to complete analysis of investigative questions 2, 3, 4, and 5 which focused on the importance of leadership development activities, participation in the leadership development activities, and the relationship of junior AMO leadership development to leader behavior and to personal background factors. This analysis included survey item 4, AMO perception of leadership development; survey items 6-24, importance of leadership development activities; items 25-31, demographics; 36-47, involvement in leadership development activities; and items 48-177, superior officer's leadership behavior.

The subprogram CROSSTABS was used to investigate the relationship between the importance of leadership development activities and the extent of participation by the AMO in the activities. This procedure included a chi-square statistic which was used to investigate the association between the variables.

Before using the data obtained from the MBS instrument, the items comprising each of the thirteen scales were analyzed using subprogram RELIABILITY to extract reliability coefficients for the scales. The ten items for each scale were then averaged to form scale variables. These thirteen scale variables were analyzed using the subprogram FACTOR. Factor analysis, while not central in this research, was performed to identify constructs relating to prior research of leader behavior.

The subprogram NONPAR CORR was then performed using the scale MBS variables as independent variables, and leadership development as dependent variable. The statistic Kendall's Tau was specified and used to examine the relationship between the two variables.

## Chapter Summary

This chapter has provided the research methodology to accomplish the research objectives presented in Chapter I. The population and sample were defined. The survey

instrument which was used to collect data was introduced, and a plan for data analysis was described. The next chapter will describe the research findings and detail the steps used in data analysis.

# IV. Findings and Analysis

## Chapter Overview

This chapter outlines the steps used in organizing the data into useful information in order to answer the investigative questions posed in Chapter I. The survey response is summarized and the specific analysis techniques are presented. These techniques include: a demographic profile of the survey respondents, leadership activities analysis, factor and reliability analysis of MBS scales, leadership development correlation analysis with superior officer leader behavior and, finally, leadership development correlation analysis with demographic items.

## Survey Response

From the random sample of 320 officers, 191 officers returned survey packages. This equates to a return rate of 59.7 percent which is considered exceptionally high since the survey package contained 27 pages and 190 items. Additionally, over 20 percent of the respondents provided written comments. This further indicates a high concern for the subject of leadership development among the respondents. Six of the surveys were not included in the analysis because they either arrived after the data collection cutoff date of 30 June 1985, or they were

returned unopened. Therefore, 185 individual cases were used in data analysis.

## Analysis

Demographic Profile. The first technique used was the subprogram FREQUENCIES in order to obtain a clear picture of the demographics of the respondent group. The results of this analysis are found in Table 2.

Leadership Activities. The next step in analysis further defined the attributes of the survey respondents. The subprogram FREQUENCIES was used again to obtain group information on survey items 6-24 and 32-47. Items 6 through 24 ask the respondent to rate the importance that he/she places on each separate leadership development activity. Items 32 through 47 ask the officer to indicate how much time or practice he/she spends in each particular leadership development activity. The results of this analysis are presented in Table 3.

From this analysis, the following activities were found to be the five most important to the junior AMO for developing personal leadership skills (based upon a combined "very important" and "extremely important" relative frequency): working experience with NCO subordinates, 85.4 percent; working experience with superior officers, 83.2 percent; TDY experience, 77.7 percent; working

TABLE 2

DEMOGRAPHIC SUMMARY OF AIR FORCE
JUNIOR AMOS SURVEYED

| Demographic Item | Response Category | Absolute Frequency | Relative Frequency (%) |
|---|---|---|---|
| Commissioning Source | USAFA | 8 | 4.3 |
| | AFROTC | 69 | 37.3 |
| | OTS | 108 | 58.4 |
| Sex | Female | 30 | 16.2 |
| | Male | 155 | 83.8 |
| Age | 20-24 years | 16 | 8.6 |
| | 25-29 years | 46 | 24.9 |
| | 30-34 years | 80 | 43.2 |
| | 35-39 years | 41 | 22.2 |
| | 40 or over | 2 | 1.1 |
| Rank | Captain | 88 | 47.6 |
| | 1st Lt | 47 | 25.4 |
| | 2nd Lt | 49 | 26.5 |
| | Maj Select | 1 | 0.5 |
| MAJCOM Assignment | SAC | 46 | 24.9 |
| | MAC | 44 | 23.8 |
| | TAC | 95 | 51.4 |
| Prior Enlisted Service | Yes | 104 | 56.2 |
| | No | 81 | 43.8 |
| Organizational Level | OMS or AGS | 68 | 36.8 |
| | FMS or EMS | 24 | 13.0 |
| | AMS or CRS | 28 | 15.1 |
| | DCM Staff | 27 | 14.6 |
| | Other | 38 | 20.5 |

TABLE 3

LEADERSHIP ACTIVITY AND IMPORTANCE SUMMARY

| Leadership Activity | Participation Category | Relative Freq (%) | Importance Category | Relative Freq (%) |
|---|---|---|---|---|
| LPDP | Yes | 15.1 | Not Important | 19.7 |
| | No | 84.9 | Somewhat | 34.4 |
| | | | Moderately | 26.2 |
| | | | Very | 13.1 |
| | | | Extremely | 6.6 |
| SOS | Yes-Correspon | 21.6 | Not Important | 21.5 |
| | | | Somewhat | 39.6 |
| | | | Moderately | 28.5 |
| | | | Very | 9.7 |
| | | | Extremely | 0.7 |
| | Yes-Residence | 22.2 | Not Important | 5.8 |
| | | | Somewhat | 12.5 |
| | | | Moderately | 34.6 |
| | | | Very | 31.7 |
| | | | Extremely | 15.4 |
| | Yes-Both | 12.4 | | |
| | No | 43.8 | | |
| ACSC | Yes-Correspon | 5.4 | Not Important | 11.8 |
| | | | Somewhat | 25.5 |
| | | | Moderately | 39.2 |
| | | | Very | 19.6 |
| | | | Extremely | 3.9 |
| | Yes-Seminar | 8.6 | Not Important | 4.3 |
| | | | Somewhat | 25.5 |
| | | | Moderately | 34.0 |
| | | | Very | 25.5 |
| | | | Extremely | 10.6 |
| | Yes-Residence | 0.0 | Not Important | 2.9 |
| | | | Somewhat | 5.7 |
| | | | Moderately | 22.9 |
| | | | Very | 40.0 |
| | | | Extremely | 28.6 |
| | No | 85.9 | | |
| Graduate Degree | Yes | 29.7 | Not Important | 11.2 |
| | No | 70.3 | Somewhat | 20.8 |
| | | | Moderately | 30.4 |
| | | | Very | 24.8 |
| | | | Extremely | 12.8 |

TABLE 3--Continued

| Leadership Activity | Participation Category | Relative Freq (%) | Importance Category | Relative Freq (%) |
|---|---|---|---|---|
| Personal Leadership Study | < One Hr/Week | 42.2 | Not Important | 7.0 |
| | 1-2 Hrs/Week | 28.6 | Somewhat | 35.5 |
| | 3-4 Hrs/Week | 20.0 | Moderately | 26.2 |
| | 5-6 Hrs/Week | 5.9 | Very | 23.3 |
| | 7-8 Hrs/Week | 1.6 | Extremely | 8.1 |
| | > 8 Hrs/Week | 1.6 | | |
| Peer Leadership | 0 Times/Week | 10.4 | Not Important | 0.0 |
| | 1-2 Times/Wk | 30.1 | Somewhat | 7.0 |
| | 3-4 Times/Wk | 25.7 | Moderately | 20.0 |
| | 5-6 Times/Wk | 9.8 | Very | 48.1 |
| | 7-8 Times/Wk | 4.9 | Extremely | 24.9 |
| | > 8 Times/Wk | 19.1 | | |
| Enlisted Leadership | 0 Times/Week | 6.6 | Not Important | 0.0 |
| | 1-2 Times/Wk | 7.7 | Somewhat | 4.9 |
| | 3-4 Times/Wk | 16.5 | Moderately | 20.0 |
| | 5-6 Times/Wk | 12.6 | Very | 37.8 |
| | 7-8 Times/Wk | 5.5 | Extremely | 37.3 |
| | > 8 Times/Wk | 51.1 | | |
| NCO Leadership | 0 Times/Week | 4.4 | Not Important | 0.0 |
| | 1-2 Times/Wk | 9.3 | Somewhat | 2.2 |
| | 3-4 Times/Wk | 17.5 | Moderately | 12.4 |
| | 5-6 Times/Wk | 14.2 | Very | 42.2 |
| | 7-8 Times/Wk | 6.0 | Extremely | 43.2 |
| | > 8 Times/Wk | 48.6 | | |
| Superior Officer Leadership | 0 Times/Week | 9.2 | Not Important | 0.0 |
| | 1-2 Times/Wk | 26.6 | Somewhat | 2.7 |
| | 3-4 Times/Wk | 24.5 | Moderately | 14.1 |
| | 5-6 Times/Wk | 18.5 | Very | 48.4 |
| | 7-8 Times/Wk | 4.9 | Extremely | 34.8 |
| | > 8 Times/Wk | 16.3 | | |
| TDY | < One Wk/Year | 29.0 | Not Important | 1.2 |
| | 1-2 Wks/Year | 16.4 | Somewhat | 6.5 |
| | 3-4 Wks/Year | 17.5 | Moderately | 14.7 |
| | 5-6 Wks/Year | 11.5 | Very | 31.8 |
| | 7-8 Wks/Year | 4.9 | Extremely | 45.9 |
| | > 8 Wks/Year | 20.8 | | |

TABLE 3--Continued

| Leadership Activity | Participation Category | Relative Freq (%) | Importance Category | Relative Freq (%) |
|---|---|---|---|---|
| Community Leadership | < One Hr/Week | 65.6 | Not Important | 15.1 |
| | 1-2 Hrs/Week | 20.2 | Somewhat | 30.9 |
| | 3-4 Hrs/Week | 8.7 | Moderately | 25.9 |
| | 5-6 Hrs/Week | 2.2 | Very | 23.7 |
| | 7-8 Hrs/Week | 1.1 | Extremely | 4.3 |
| | > 8 Hrs/Week | 2.2 | | |
| Church Leadership | < One Hr/Week | 76.4 | Not Important | 20.5 |
| | 1-2 Hrs/Week | 15.4 | Somewhat | 28.7 |
| | 3-4 Hrs/Week | 4.4 | Moderately | 24.6 |
| | 5-6 Hrs/Week | 1.1 | Very | 16.4 |
| | 7-8 Hrs/Week | 0.5 | Extremely | 9.8 |
| | > 8 Hrs/Week | 2.2 | | |
| Prof Org Leadership | < One Hr/Week | 59.8 | Not Important | 13.6 |
| | 1-2 Hrs/Week | 27.7 | Somewhat | 32.1 |
| | 3-4 Hrs/Week | 7.6 | Moderately | 30.7 |
| | 5-6 Hrs/Week | 2.2 | Very | 20.0 |
| | 7-8 Hrs/Week | 2.2 | Extremely | 3.6 |
| | > 8 Hrs/Week | 0.5 | | |
| Sports Leadership | < One Hr/Week | 64.8 | Not Important | 9.6 |
| | 1-2 Hrs/Week | 13.7 | Somewhat | 30.9 |
| | 3-4 Hrs/Week | 9.9 | Moderately | 39.0 |
| | 5-6 Hrs/Week | 8.2 | Very | 17.6 |
| | 7-8 Hrs/Week | 2.2 | Extremely | 2.9 |
| | > 8 Hrs/Week | 1.1 | | |
| Other AF Related Activity | < One Hr/Week | 71.0 | Not Important | 14.7 |
| | 1-2 Hrs/Week | 20.8 | Somewhat | 28.8 |
| | 3-4 Hrs/Week | 6.0 | Moderately | 30.1 |
| | 5-6 Hrs/Week | 1.1 | Very | 21.2 |
| | 7-8 Hrs/Week | 1.1 | Extremely | 5.1 |
| Other Leadership Activity | < One Hr/Week | 63.0 | Not Important | 0.0 |
| | 1-2 Hrs/Week | 8.7 | Somewhat | 13.0 |
| | 3-4 Hrs/Week | 4.3 | Moderately | 43.5 |
| | 5-6 Hrs/Week | 6.5 | Very | 34.8 |
| | 7-8 Hrs/Week | 3.3 | Extremely | 8.7 |
| | > 8 Hrs/Week | 14.1 | | |

experience with junior enlisted, 75.1 percent; and working experience with peers, 73 percent.

In the second step of this analysis, leadership activities that were handwritten by the respondents were manually tabulated and organized into categories. Of the 185 respondents, 102 individuals specified at least one leadership activity they considered important to their personal leadership development. A total of 385 activities were specified. Although a wide variety of activities was mentioned, they could be grouped into categories similar to those addressed earlier in the survey. Table 4 displays the frequency of participation in leadership activities by general category. Participation frequencies for specific activities within each of the six categories are contained in Appendix B, Tables 10 to 15.

The last step in the activities analysis involved a CROSSTAB procedure to determine if any significant relationships exist between the amount of importance the officers place on leadership development methods available to them and the extent of their participation in those activities. The CROSSTAB subroutine includes a chi-square test of statistical significance which is used to determine if any systematic relationships exist.

As a result of the CROSSTAB procedure described above, eight of the nineteen leadership development activities were found to be statistically dependent on the

TABLE 4

OTHER LEADERSHIP DEVELOPMENT ACTIVITIES
BY GENERAL CATEGORY

| Other Leadership Activity | Absolute Frequency | Relative Frequency |
|---|---|---|
| Air Force Related or Additional Duties | 113 | 29.4 |
| Professional Organization | 80 | 20.8 |
| Community | 59 | 15.3 |
| Sports | 61 | 15.8 |
| Church | 44 | 11.4 |
| Other | 21 | 5.5 |
| Unreadable | 7 | 1.8 |
| | 385 | 100.0 |

importance placed on them by the junior AMO with an alpha = .05. They were: postgraduate degree, personal leadership study, working experience with NCO subordinates, temporary duty leadership experience, church leadership, professional organization leadership, other Air Force related leadership activities, and other leadership activities. The results are summarized in Table 5.

Reliability and Factor Analysis of MBS Scales. Before using the MBS data, the ten individual item scores for each of the thirteen scales were summed to form scale variables. Also, the means and standard deviations of each scale variable were computed in order to obtain a picture

TABLE 5

CROSSTAB SUMMARY OF IMPORTANCE AND INVOLVEMENT IN LEADERSHIP ACTIVITIES

| Leadership Activity | Chi-square Value | Significance Level |
|---|---|---|
| Lieutenants Professional Development Program | 4.05 | .40 |
| SOS by Correspondence | 5.84 | .92 |
| SOS In-residence | 14.99 | .24 |
| ACSC by Correspondence | 8.41 | .39 |
| ACSC by Seminar | 1.50 | .83 |
| ACSC In-residence | 0.53 | .97 |
| Postgraduate degree | 9.63 | .05 |
| Personal Leadership Study | 66.62 | .0001 |
| Peer Leadership | 21.31 | .12 |
| Enlisted Leadership | 22.05 | .10 |
| NCO Leadership | 27.18 | .03 |
| Superior Officer Leadership | 12.09 | .67 |
| TDY Leadership | 31.85 | .05 |
| Community Leadership | 30.15 | .07 |
| Church Leadership | 74.01 | .0001 |
| Professional Organization Leadership | 55.90 | .0001 |
| Sports Leadership | 28.91 | .09 |
| Other Air Force Related Activities | 39.25 | .001 |
| Other Leadership Activities | 21.18 | .05 |

of the average leader behavior of superior officers. The first analysis consisted of extracting reliability coefficients for each of the thirteen MBS scales, using the component ten items for each scale. The subprogram RELIABILITY was used to extract scale coefficients. Further, the Cronbach's alpha method was specified in the control program. Reliability refers to the property that each item in the scale measures the same behavioral dimension. The results of this analysis, as well as the scale means and standard deviations, are presented in Table 6. Internal consistency between items in each scale is indicated by the high reliability coefficients found. The lowest scale reliability found was .86, monitoring operations. This value, and the others, indicate that the scales accurately measure or estimate the true population values (Nie and Hadlai, 1981:248).

The subprogram FACTOR was then performed on these thirteen variables, each representing one of Yukl's leader behavior categories. This was necessary due to the structural limitation of SPSS. The subprogram FACTOR can only handle 100 variables after increasing the workspace to the maximum allowable value. Even so, a factor analysis of 130 variables with only 125 cases (those individuals who answered the MBS) would be meaningless since the variable to case ratio approaches 1 to 1. Principal component factoring was specified, since this method "does not

TABLE 6

RELIABILITY ANALYSIS COEFFICIENTS AND SCALE VARIABLE MEANS AND STANDARD DEVIATIONS

| | Reliability | | |
|---|---|---|---|
| Scale Variable Behavior | Cronbach's Alpha | Mean | Standard Deviation |
| Informing | .89 | 2.641 | .684 |
| Consulting and Delegating | .91 | 2.578 | .706 |
| Planning and Organizing Operations | .91 | 2.398 | .755 |
| Problem Solving and Crisis Management | .90 | 2.782 | .632 |
| Clarifying Roles and Objectives | .90 | 2.208 | .765 |
| Monitoring Operations | .86 | 2.508 | .656 |
| Motivating Task Commitment | .89 | 2.344 | .731 |
| Recognizing and Rewarding | .92 | 2.476 | .770 |
| Supporting | .93 | 2.856 | .726 |
| Developing | .92 | 2.266 | .797 |
| Harmonizing and Team Building | .93 | 2.488 | .747 |
| Representing | .92 | 2.669 | .700 |
| Interfacing | .92 | 2.678 | .669 |

require any assumptions about the general structure of the variables" (Nie et al., 1975:479). Additionally, this factoring method used orthogonal extraction with VARIMAX rotation specified. No questions or scales were eliminated due to this procedure; however, this was not the intent of analysis. Rather, the researcher was interested in the idea that the scale variables may follow a construct pattern identified in previous research. The results are summarized in Table 7.

From Table 7, two constructs can be identified using factor loadings of .50 or greater. These constructs follow the classic patterns of leader behavior identified by previous Ohio State University research; namely, people versus task emphasis. As the reader will recall from Chapter II, the original studies called the dimensions "initiating structure" (task oriented) and "consideration" (relationship oriented).

In this study, the following variables were found to contribute to the construct of task oriented leader behavior (factor 1 in Table 7): (1) planning and organizing behavior, (2) problem solving and crisis management, (3) clarifying roles and objectives, (4) monitoring operations, (5) motivating task commitment, (6) developing, (7) harmonizing and team building, and (8) interfacing.

Contributing to the construct of relationship oriented leader behavior were the following five variables

TABLE 7

FACTOR ANALYSIS WITH VARIMAX ROTATION

| Scale Variable Behavior | Loading Factor 1 | Loading Factor 2 |
|---|---|---|
| Informing | .47 | .66 |
| Consulting and Delegating | .14 | .91 |
| Planning and Organizing Operations | .70 | .34 |
| Problem Solving and Crisis Management | .75 | .38 |
| Clarifying Roles and Objectives | .72 | .43 |
| Monitoring Operations | .80 | .22 |
| Motivating Task Commitment | .75 | .44 |
| Recognizing and Rewarding | .47 | .71 |
| Supporting | .32 | .71 |
| Developing | .66 | .39 |
| Harmonizing and Team Building | .76 | .42 |
| Representing | .29 | .79 |
| Interfacing | .85 | .16 |

(factor 2 in Table 7): (1) informing, (2) consulting and delegating, (3) recognizing and rewarding, (4) supporting, and (5) representing.

There are, however, conceptual difficulties with classifying developing and harmonizing and team building behaviors as task oriented. Perhaps in the case of harmonizing and team building behavior, two separate dimensions are indicated. Harmonizing behavior may contribute to the relationship-oriented dimension, while team building contributes to task. However, the meaning of the developing behavior is not at all clear, with rather high loadings on both factors.

Correlation Analysis. The last step in formal analysis involved two substeps. The first set of correlations was performed with leadership development as the dependent variable (DV), and the MBS scale behaviors as the independent variables (IV). The researcher was interested in the notion that certain leader behaviors are related to the development of the subordinate's leadership skills.

The second set of correlations used the same DV, leadership development. However, the IVs were the various demographic items outlined in Chapter I. The interest in this analysis stems from curiosity about the nature of

leadership development between groups or attributes of the respondents.

The subprograms NONPAR CORR and BREAKDOWN were used for this analysis. NONPAR CORR is used in the first evaluation with the MBS scales because no distributional assumptions are necessary. The statistic Kendall's Tau is used because of its appropriateness when the data contain a large number of ties at each rank (Nie et al., 1975:289). The subprogram BREAKDOWN is used in the second part of the analysis because the IVs are all nominal level data while the DV is interval level. In addition, BREAKDOWN includes a one-way analysis of variance (ANOVA), and levels of statistical significance between group means.

MBS Correlations with Leadership Development. Before running the NONPAR CORR subroutine, the ten variables making each MBS scale were summed and divided by the number of valid responses per scale per respondent. This procedure adequately accounts for the possibility of missing responses. If the respondent answered less than five of the ten variables, the case was deleted from further analysis of that scale. Next, the correlation was performed using the respondent's own perception of his/her leadership development. The results of this analysis are contained in Table 8.

TABLE 8

MBS CORRELATIONS WITH LEADERSHIP DEVELOPMENT

| MBS Scale Behavior | N of Cases | Kendall's Tau | Significance |
|---|---|---|---|
| Informing | 126 | -.14 | .02 |
| Consulting and Delegating | 126 | -.06 | .20 |
| Planning and Organizing Operations | 121 | -.17 | .01 |
| Problem Solving and Crisis Management | 122 | -.14 | .03 |
| Clarifying Roles and Objectives | 123 | -.16 | .01 |
| Monitoring Operations | 122 | -.14 | .02 |
| Motivating Task Commitment | 123 | -.17 | .01 |
| Recognizing and Rewarding | 122 | -.14 | .02 |
| Supporting | 123 | -.19 | .01 |
| Developing | 122 | -.14 | .02 |
| Harmonizing and Team Building | 123 | -.06 | .19 |
| Representing | 119 | -.06 | .22 |
| Interfacing | 113 | -.06 | .20 |

Demographic Correlations with Leadership Development. The final major analysis accomplished in this thesis concerned a correlation between demographic items and the individual's leadership development. As stated, the subprogram BREAKDOWN was performed including a one-way ANOVA. The results of this analysis are summarized in Table 9. From this analysis, prior enlisted service and rank were identified as having significant differences between group means.

TABLE 9

ANOVA SUMMARY

| Demographic Independent Variable | F | Degrees of Freedom | Significance Level |
|---|---|---|---|
| MAJCOM Assignment | 1.862 | 2 | .16 |
| Organizational Level | .241 | 4 | .91 |
| Prior Enlisted Service | 2.849 | 1 | .09 |
| Sex | .709 | 1 | .40 |
| Commissioning Source | .280 | 2 | .76 |
| Rank | 3.338 | 3 | .02 |
| Age | 1.456 | 4 | .22 |

## Chapter Summary

This chapter presented the findings of the research, and described the formal analysis techniques. The results of each analysis were presented in both tabular and narrative form. The major areas included in analysis were: demographic profile of respondents, leadership activities analysis, factor and reliability analysis and, last, correlation analysis. In the next chapter, the findings are discussed and each hypothesis or question is restated and answered using the analysis from this section as support. Also, the written comments of respondents are evaluated and discussed. Finally, recommendations for both further research and the field are presented.

# V. Conclusions and Recommendations

## Chapter Overview

This chapter answers the questions and hypotheses posed in Chapter I. Each is restated, answered, and discussed based upon the information obtained from analysis. Further, the written comments of the respondents are summarized and the implications of them to future Air Force leadership development efforts are examined. Last, this thesis closes with recommendations for both future research and the field.

## Background in Leadership Development--Question 1

> What is the relationship between personal background factors and the extent of leadership development?

ANOVA analysis revealed few significant relationships between individual demographic variables and leadership development. This is rather reassuring since one would not predict significant differences in leadership development among the personal and organizational factors. For instance, major command assignment is not significantly related to leadership development, $F(2) = 1.862$, $p < .16$. Organizational level is likewise not significantly associated with the AMO's leadership development, $F(4) = .241$, $p < .91$.

Prior enlisted experience was found to be somewhat related to the junior AMO's leadership development. ANOVA analysis resulted in: $F(1) = 2.849$, $p < .09$. This indicates that the means of the two groups differ at a marginally significant level, with a probability of error less than or equal to 9 percent. In this case it appears that having prior enlisted experience may increase the junior officer's leadership ability at this point in his career. However, several questions remain unanswered. For instance, we do not know how many years of enlisted service are necessary in order for this relationship to hold. Nor do we know if this relationship disappears after the first few years of commissioned service. Unfortunately, no data were collected on total years of enlisted or commissioned service. Hence, no attempt can be made in this thesis to clarify this finding; however, the relationship between prior service and leadership may merit further research based on these results.

As a result of ANOVA analysis, a significant relationship was found between rank and leadership development with $F(2) = 4.156$, $p < .02$. This indicates that the means of the three groups significantly differ with a probability of error less than 2 percent. In this case, attaining higher rank significantly increases the junior officer's perception of his own leadership ability. Thus, it appears that as an officer progresses in rank and ostensibly,

experience and responsibility, leadership development likewise increases. While this is hardly a startling conclusion, it is consistent with the respondents' importance ratings in the areas of superior officer, peer, enlisted, and NCO working leadership experience.

Another explanation for the relationship could be the fact that military rank is the most recognizable formal and outward symbol of leadership. Thus, it may be hard for the individual to separate his perceptions of his own leadership development with the formal symbol of leadership--rank.

No significant relationships were found between commissioning source and sex and leadership development among junior AMOs. The results of ANOVA analysis for commissioning source and sex are: $F(2) = .280$, $p < .76$, and $F(1) = .709$, $p < .40$, respectively. Since ANOVA assumes equal sample size in each cell and this condition was not satisfied in these two questions, interpretation of the results is particularly limited.

No significant relationship was found between age and leadership development: $F(4) = 1.456$, $p < .22$. This result is somewhat surprising since rank was found to be related to leadership development and at least one function of increasing rank is increasing age.

## Involvement in Leadership Activities--Question 2

What is the extent of involvement in various leadership development activities among junior AMOs?

This research identified a myriad of activities both Air Force and civilian related. Some categories were pre-identified for the respondents. However, write-in responses have demonstrated that leadership development activities seem to be as individual as the leader himself.

The most frequently used Air Force activities were: (1) TDY leadership experience, one or more weeks per year (71.0 percent); (2) direct personal leadership of enlisted, over eight times per week (51.1 percent); (3) direct personal leadership of NCO subordinates, over eight times per week (48.6 percent); (4) direct personal leadership of peers, one to two times per week (30.1 percent); (5) other Air Force related leadership activities including additional duties, one to four hours per week (26.8 percent); (6) following the leadership of a superior officer, one to two times per week (26.6 percent); and (7) SOS in-residence (22.2 percent).

## Importance of Leadership Activities--Question 3

What is the perceived importance of leadership development methods or activities used by or available to junior AMOs?

The leadership activities analysis provided insight into this question. Junior AMOs place very high importance

on working relationships with enlisted, NCO, officer personnel, and job-related TDYs for their personal leadership development. Therefore, these activities received high participation and importance ratings by the officers. However, two of the formal Air Force methods available were deemed largely "not important" or only "somewhat important" to leadership development. They were: Lieutenants Professional Development Program (54.1 percent), and SOS by correspondence (61.1 percent). However, participation in LPDP among this sample was very low (only 15.1 percent). So, a possible explanation for this is that a noticeable void exists in the formal leadership development methods available to junior officers early in their careers. Ironically, these two programs are often the only formal development methods available to officers in their first two years of commissioned service.

In addition to the involvement percentages discussed in question 2 above, each of the seven activities, except "other Air Force and additional duties," were rated very high in personal importance in developing sound leadership skills. Specifically, TDY experience was rated "very" or "extremely" important by 77.7 percent of AMOs. Enlisted leadership was rated in the same two categories by 75.1 percent; NCO leadership 85.4 percent; peer leadership, 73.0 percent; other Air Force related activities, 26.3 percent; following leadership of superior officer,

83.2 percent; and SOS in residence, 47.1 percent. In the case of other Air Force related activities, perhaps the officer perceives the additional duty as taking precious time away from other more important aspects of his job, including direct leadership of subordinates.

Importance and Participation--
Question 4

> What is the relationship between the perceived importance of leadership development activities and participation in them by AMOs?

Importance of enlisted leadership, importance of NCO leadership, importance of TDY leadership, and importance of other Air Force related additional duties were found to be statistically dependent on the amount of participation by the junior AMO. This could be interpreted that the officer performs the activity because he perceives its importance to further develop his personal leadership ability. Of course, the converse could also be stated: the activities are important to the officer simply because he does them. Even if the latter is true, one cannot dismiss the fact that the importance to the officer of these activities is real, and his perception of leadership is exercised when they are performed.

Non-Air Force activities were also mentioned by the respondents although they did not seem nearly as important to the officer for personal leadership development. For example, personal leadership study was rated

"very" or "extremely" important by 31.9 percent of the AMOs, community leadership 28.0 percent, church leadership 26.2 percent, professional organization leadership 23.6 percent, sports leadership 20.5 percent, and other leadership activities 43.5 percent. As implied by the percentages, other leadership activities and personal leadership study seem to be the most fruitful of non-Air Force activities for developing the officer's leadership. It was in these areas that the most creative methods were written by the respondents (see Table 15, and Appendix C). Furthermore, participation in each of the non-Air Force activities was statistically dependent on the importance placed on them by the AMO. The results indicate that junior AMOs may choose to participate in non-Air Force leadership activities they believe benefit them the most or that they enjoy. On the other hand, they may believe in the importance of participation simply because they are involved in the activities and enjoy them. Personal study, professional organization and other leadership activities have the most active participation. For instance, 57.7 percent claim to have a personal leadership study program, 40.2 percent claim professional organization leadership, and 36.9 percent claim participation in other leadership development activities of their choice for one or more hours per week.

Participation in the remaining activities (using the same criteria of one or more hours per week involvement) is: community leadership, 34.4 percent; church leadership, 23.6 percent; sports leadership, 35.1 percent. Also, completion of the graduate degree was claimed by 29.7 percent of the AMOs and 37.6 percent rated it "very" or "extremely" important to develop their leadership skills. This relationship was also statistically dependent.

MBS Leader Behavior and Leadership Development--Question 5

What is the relationship between the superior's leader behavior and the extent of junior AMO leadership development?

a. A positive relationship is hypothesized between the superior's consulting and delegating behavior and the junior AMO's leadership development.

A positive relationship was hypothesized in Chapter I, based upon the rationale that more contact, discussion, and delegation the leader provided the junior, the more the junior's own leadership development would be enhanced. However, as the summary in Table 8 shows, no positive relationships were found between leader behavior and junior AMO leadership development.

This could be explained in at least three possible ways. First, negative relationships could indicate that if a junior officer has developed well as a leader, then his/her superior officer has to do (or, in fact does) less

community that result not only in little recognizing and rewarding behavior, but perhaps ignoring and punishing behavior. While this may be a rather bold inference, supervisors and leaders may be largely perceived as ignoring or punishing their subordinates in the aircraft maintenance career.

Again, another possible explanation is that the measurement of leadership development is not accurate or valid enough to be used in analysis. The respondents' rating of their leadership development was skewed to the left; thus it is possible that they overrated themselves.

A final explanation of this reversal is that it is a true representation of the relationship. Indeed, it is possible that a leader, upon recognizing a subordinate's own leadership ability, ceases to recognize or reward the subordinate for achievements that he now routinely expects.

c. A positive relationship is hypothesized between the superior's development behavior and the junior AMO's leadership development.

NONPARR CORR analysis revealed a moderate and negative correlation between developing behavior and leadership development (-.14), alpha = .02. This relationship is also opposite from the hypothesis. Hence, the same explanations found in questions 5a and 5b above also apply.

However, applying the same rationale to the developing variable, one would expect a much higher correlation between it and actual leadership development, whether positive or negative. Perhaps this is not the case in this study because Yukl's developing scale was not perceived as strictly a leadership developing scale of behaviors. Indeed, it is not. In short, it may be difficult for respondents to distinguish between different types of developing behavior, although not difficult to recognize developing behavior itself.

As with recognizing and rewarding behavior, the leader may recognize that a younger leader has developed leadership skills and reduce developing him. Conversely, if the leader perceives a need in the junior AMO, then he increases his developing behavior in order to fulfill the junior's need.

These inferences, while based upon rational analysis, deserve further study because of the possible problems identified above. Particularly, the measurement of leadership development needs to be improved, or at least reduced in bias.

Suggestions for Improvement--
Question 6

What are junior AMO suggestions for improving or changing the methods of leadership development?

In answering this research question, a subjective perspective was taken; however, the author has included

all of the respondents' comments in Appendix C. They have been edited only to maintain anonymity or to correct minor errors in grammar or punctuation. Where possible, examples from the comments are given so that the reader may discern the accuracy of the inference or conclusion.

The overwhelming interest in the subject of improving leadership development in the Air Force was very edifying to the author. The respondents as a group are interested in making substantive changes in the programs available to them or, in some cases, creating new ones specifically aimed at developing leadership skills. The comments generally encompass four broad categories: (1) suggesting new programs, (2) criticizing current programs or commissioning sources, (3) suggesting that the aircraft maintenance field is near ideal for developing leadership, and (4) expressing their concern for personal leadership development. Each of these four general areas will be discussed in detail and related to prior research findings.

## Suggestions for New Programs

A number of officers expressed a desire to implement new programs to specifically address the leadership development needs of junior officers. Basically, two types of programs were suggested. First of all, many of the programs suggested emphasized the experiential

learning of leadership through Leadership Reaction Courses, Project X, or other hands-on methods. This is very similar to the Army's interest discussed in Chapter II where junior officers participated in engagement simulations to enhance leadership skills. Also, the value of TDY experience on deployments was mentioned frequently by junior AMOs. Indeed, one officer said that

> . . . exercises such as deployments, cimcells, war operations centers (WOCs) do more toward providing leadership skills than any other source--hands on experience. (Appendix C, Comment 7)

Another officer believed that all military officers need to possess the ability to actually lead subordinates into combat (Appendix C, Comment 14). Therefore, he suggested specific training in combat arms and tactics. One officer suggested that the OTS and SOS programs be modified to include more experiential exercises. Specifically, the proposal includes a war game type survival problem where friendly and hostile forces oppose each other in a simulated conflict (Appendix C, Comment 31).

Second, other officers suggested a semiformal program of personal study, lecture, and seminar. This idea conforms to the "Another Nickel" program suggested by Colonels Rider and Lewis (1984:46-52). Indeed, Comment 1 in Appendix C states: "the readings would be from military history, biography, and ethics with an emphasis on how and why people handled their given leadership situations."

Another officer suggested the Air Force look at civilian industry programs or other U.S. military services (Appendix C, Comments 5, 6).

One officer made the observation that an aircraft maintenance officer cannot command respect and lead unless he is technically competent (Appendix C, Comment 17). Thus, he concludes that the career field desperately needs an intermediate apprenticeship program for all aircraft maintenance officers. This program would make the junior AMO more credible as a leader by increasing the technical knowledge from which his decisions as a leader are based. This idea that technical expertise is needed as a foundation for influence over others is not new; it appears throughout the leadership literature.

Criticism of Current Programs

The second broad category of written response focused on criticism of current programs or commissioning sources as methods of junior officer leadership development.

The most frequent opinion expressed was the inadequacy of any PME correspondence course to develop leadership (e.g., Appendix C, Comments 23-26). This is in spite of the fact that the SOS course by correspondence has been restructured recently to include two major areas of officership and leadership. For instance, one

individual stated: "leadership through correspondence courses is ineffective" (Appendix C, Comment 15). Other officers suggest that PME should be offered in-residence only, or at least insure all eligible officers attend (Appendix C, Comments 36, 39).

No commissioning source was immune from criticism of leadership development. One officer suggested that "my ROTC preparation did little to influence my leadership skills" (Appendix C, Comment 13), while another suggested the ROTC curriculum could be greatly enhanced by the inclusion of "warrior-leader" programs (Appendix C, Comment 40). "OTS was not a leadership-developing atmosphere," was the comment of one officer who went on to say that the officers at OTS were not good examples of leaders. The Air Force Academy curriculum received criticism from one officer when he stated: "leadership is only developed experientially but needs an initial foundation academically. The USAFA should have been a much richer environment in both respects" (Appendix C, Comment 39).

So, it seems there may be improvement necessary in both the pre- and post-commissioning programs to provide the junior officer with a stronger foundation in both the theory and practice of leadership.

Aircraft Maintenance Career Field

The third major area of comment is quite different from the previous two. In fact, the officers suggest that

the aircraft maintenance career field is perhaps ideal for developing leadership skills. In most cases, this suggestion comes from officers who have a measure of comparison available--having served in a rated career before aircraft maintenance. For example, one officer said that he has learned more about leadership in a short time in maintenance than in many years as a flyer. He summed up by stating: "I believe leadership development is a matter of taking broadly educated young officers and challenging them in people-intensive career fields such as maintenance" (Appendix C, Comment 9).

Another officer agrees with this position when he says: "within aircraft maintenance, especially as OIC, Assistant OIC of an AMU, the diversity is continually present as an opportunity to expand one's leadership" (Appendix C, Comment 16). He goes on to describe the enormous benefits, in his eyes, of maintenance related deployments and TDYs. Additionally, he advocates observing different leaders, at various leadership levels, while forming a personal style.

"The maintenance career field is probably one of the best, if not the best, career field to develop strong leadership qualities in officers," reports another officer (Appendix C, Comment 30). He supports his conclusion by pointing to the fact that aircraft maintenance problems

continually confront the officer and must be overcome by sound decisions and leadership.

On the other hand, one officer responded with the notion that, since the aircraft maintenance career field is so leadership-intensive, then the Air Force should do a better job of predetermining those with leadership potential before assigning them to the field. Indeed, he states: "leadership roles [such as those in the 40XX AFSC] are simply not for everyone" (Appendix C, Comment 29). Thus, he suggests that officers should only be placed in leadership AFSCs such as aircraft maintenance if they possess a certain amount of leadership qualities or potential.

Concern for Personal Leadership Development

In the last major area of respondent suggestion, officers express their concern for adequate and continuing personal leadership development. They responded in primarily two distinct subjects. First, they suggested that the rigors and demands of the aircraft maintenance field leave them little time for other leadership developing activities. Second, they expressed concern that their professional development is hampered by unconcerned superiors, and the lack of a formal professional maintenance officer development program.

Perhaps the best spokesman for the first subject is the officer who said: "flightline related AFSC junior officers don't have time for these [other leadership developing] activities (if they want to keep their positions!!)" (Appendix C, Comment 34). Many others also expressed concern over time constraints on their personal leadership development (Appendix C, Comments, 2, 3, 4, 13).

However, one officer disagrees with the "not enough time argument." Rather, he believes that too much time is wasted in nonproductive leadership development programs. In defense of his position, he states ". . . off duty education and correspondence programs take away time that could be spent at work--or relaxing so you don't get burnt out and become ineffective" (Appendix C, Comment 35). This officer mentions the phenomenon of job burn out; other officers in the survey sample have also identified it as a problem (e.g., see Comments 10, 17, and 20).

The second problem identified by respondents concerns the perceived lack of a continuing development program for AMOs combined with the lack of concern by "top management" for the leadership development of junior officers.

One officer may have identified one of the causes of this perceived lack of concern when he observed that

> . . . today's senior officers advance not through job accomplishment or developing subordinates' potentials, but by avoiding incidents and covering up errors in their areas of responsibility. (Appendix C, Comment 8)

Of course, this appears like a bitter and exaggerated example; however, there may be reason for concern if, in fact, this is not an isolated incident. However, another officer substantiates the observation by stating: "We [AMOs] need an on going training program" (Appendix C, Comment 10).

Other officers also express the same desire for more formal leadership development specifically designed for the aircraft maintenance field, as well as changes in superior officer development behavior such as improved feedback on performance (e.g., see Appendix C, Comments 27, 32, 33, 37, and 38).

Summary of Respondent Suggestions

In conclusion, the comments of the young officers certainly indicate a strong concern for leadership development in the officer corps of Air Force aircraft maintenance. Suggestions for improvement run the gamut from more technical development to more formal changes in pre-commissioning or professional courses. Others would like to see a very different focus taken and a move toward more experiential leadership development such as combat tactics and survival. At the very least, officers would like to see resident PME courses available to all eligible officers. Last, some officers suggest the Air Force do better in recruiting, evaluating, and placing officers

in careers that suit their leadership qualities and potentials.

Recommendations for Future Research

This thesis has focused on rather global issues of leadership development in the Air Force, specifically in the aircraft maintenance career field. Much has been learned from the effort; however, many questions have arisen that require further examination.

First, since a primary variable in the study was the subordinate's perception of his own leadership development, the research should be replicated with an alternate measurement criterion. For example, either the junior officer's immediate subordinate or superior may be selected to rate the AMO on leadership development. This would perhaps enter less bias into the measurement than presently obtained. Indeed, it is possible that the propensity of individuals to answer the survey is related to their perception of their own leadership development.

Second, response to the Managerial Behavior Survey was adequate for analysis purposes (about 65 percent of the respondents completed the MBS), but may have been higher if the survey was shorter. In addition, because of the survey length, some respondents believed it focused too much on their supervisor as a leader rather than them. Therefore, it is recommended that the inquiry into possible

relationships between subordinate leadership development and superior leader behavior be continued with another, shorter survey.

A third recommendation for future research includes areas that were found serendipitously. For example, since some officers claimed the aircraft maintenance field was near ideal for junior officer leadership development, this should be substantiated or refuted by research. Also, the implications of this for officer recruitment, training, and placement in the 40XX career field should be examined.

Another interesting discovery that should be studied is the adequacy of correspondence courses (such as 30S) to leadership development in leadership intensive career fields such as aircraft maintenance. Perhaps the correspondence method is more adequate in certain career fields and not in others. The feasibility of adding more experiential learning to both resident and nonresident forms of professional military education should be evaluated.

Last, future research should include a measurement of need strength for further leadership development. It is possible, for instance, that differences exist between individuals' perceptions of how much more leadership development they need. This may in turn affect levels of

participation in leadership developing activities of the individual.

Recommendations for the Field

This research does not provide a cookbook for development of leadership skills, nor was this its intent. For many officers, the aircraft maintenance field itself provides much challenge and opportunity to develop leadership skills. For others, however, more (or simply different) outside leadership activities are needed. Supervisors of junior officers should be aware of this and follow a plan of development tailored to the individual needs of the officer. Likewise, junior officers should self-evaluate, identify strengths and weaknesses in their professional development, and recognize the myriad avenues available to them to fulfill their individual needs.

DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY (AU)
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433

9 MAY 1985

Appendix A: Survey Instrument

REPLY TO ATTN OF: LS (Capt Morabito/AUTOVON 785-6569)

SUBJECT: Research Questionnaire on Leadership Development (USAF Survey Control Number 85-47, expires 31 Aug 85)

TO: Selected Air Force Company Grade Aircraft Maintenance Officers

1. Please take the time to complete the attached questionnaire and return in the enclosed envelope by 31 May 85.

2. The Air Force Institute of Technology and the Air Force's Leadership and Management Development Center are interested in how aircraft maintenance officers develop and enhance personal leadership ability. This questionnaire is being used to obtain information from selected aircraft maintenance officers like yourself on the leadership development methods you use and which are important to you for success in the field.

3. Please be assured that all information you provide will be held in the strictest confidence. Your individual responses will never be associated with you personally.

4. Your participation is completely voluntary but we would certainly appreciate your help.

Larry L. Smith

LARRY L. SMITH, Colonel, USAF
Dean
School of Systems and Logistics

3 Atch
1. Questionnaire
2. Answer Sheet
3. Return Envelope

SURVEY TO ASSESS THE LEADERSHIP DEVELOPMENT

OF AIR FORCE COMPANY GRADE AIRCRAFT MAINTENANCE OFFICERS

USAF Survey Control Number 85-47, expires 31 August 1985

## GENERAL INSTRUCTIONS

This survey is in three parts. Part I asks you to describe your leadership development activities and professional background. Part II asks you to describe the leader behavior of the superior officer with which you work most closely. Part III gives you an opportunity to describe the importance of various types of leader behavior for effective performance of the superior officer's job.

Please complete the survey by filling in the circle for each of your answers on AFIT Form 11E, "Organizational Assessment Form." Use a number 2 pencil only. Do not staple, fold or damage the answer sheet. For the questions that ask for written response, please write your answer on the survey itself. You may find it easier to fill in the booklet first, and then transcribe your answers to the answer sheet. When you are done, place the survey and the answer sheet in the return envelope provided and mail it promptly. Thank you for your assistance.

## PART I

## AIRCRAFT MAINTENANCE OFFICER LEADERSHIP ACTIVITIES

For the questions in Part I, please use this definition of Leadership Development:

Any method or activity used by you to enhance your personal ability to influence your subordinates to achieve organizational goals.

1. To what extent did your precommissioning program develop your abilities as a leader?

   D. Don't know
   NA. Not applicable
   1. Not at all
   2. Very little
   3. About average
   4. Very much
   5. A great deal

2. To what extent did any prior enlisted experience develop your abilities as a leader?

   D. Don't know
   NA. Not applicable
   1. Not at all
   2. Very little
   3. About average
   4. Very much
   5. A great deal

3. To what extent did your experience before entering the Air Force develop your abilities as a leader?

   D. Don't know
   NA. Not applicable
   1. Not at all
   2. Very little
   3. About average
   4. Very much
   5. A great deal

4. To what extent do you now feel you have developed as a leader?

D. Don't know
NA. Not applicable
1. Not at all
2. Very little
3. About average
4. Very much
5. A great deal

5. How would you rate your immediate superior in overall leadership effectiveness?

D. Don't know
NA. Not applicable
1. Not effective
2. Somewhat effective
3. Moderately effective
4. Very effective
5. Totally effective

For items 6 through 24 below:

Use the scale below to rate each of the following activities for its degree of importance in developing your personal leadership skills.

D. Don't know
NA. Not applicable
1. Not important
2. Somewhat important
3. Moderately important
4. Very important
5. Extremely important

6. Lieutenants Professional Development Program

7. Squadron Officer School (SOS) by Correspondence

8. SOS In-residence

9. Air Command and Staff College (ACSC) by Correspondence

10. ACSC by Seminar

11. ACSC In-residence

12. Postgraduate education

13. Personal Study of Leadership, History, Military Leaders

D. Don't know
NA. Not applicable
1. Not important
2. Somewhat important
3. Moderately important
4. Very important
5. Extremely important

14. Interaction or working experience with peers

15. Interaction or working experience with enlisted subordinates

16. Interaction or working experience with NCO subordinates

17. Interaction or working experience with superior officers

18. Temporary Duty on job-related deployments or exercises

19. Community-related activities (i.e., Scouting, Special Olympics, Base tours, etc.)
Please specify: _____

20. Church-related activities (i.e., Lay Leadership, Fund raising, Social event organizing, etc.)
Please specify: _____

21. Professional organization activities (i.e., Club positions held, Project coordination, etc.)
Please specify: _____

22. Sports-related activities (i.e., Coaching, Team leadership, Events organizing, etc.)
Please specify: _____

23. Other Air Force related activities (i.e., Base Honor Guard, USAFA/AFROTC liaison or flight commander, Additional duties, Junior Officer Council, etc.)
Please specify: _____

24. Any other activity
Please specify: _____

SUGGESTIONS:

In this section, please express your thoughts on overall leadership development in the Air Force. Please feel free to provide suggestions or express your opinion regarding improving or changing any of the programs available to you. In addition, you could suggest potential future programs that you would like to see implemented.

BACKGROUND INFORMATION: This part of the survey, Questions 25 through 47, asks you to provide general information about yourself, your present assignment, and the amount of time you spend in various leadership development activities.

25. Source of commissioning:

1. USAFA
2. AFROTC
3. OTS
4. Other
Please specify: _____

26. Sex:

1. Female
2. Male

27. Present age in years:

1. 20-24
2. 25-29
3. 30-34
4. 35-39
5. 40 or over

28. Rank:

1. Captain
2. 1st Lieutenant
3. 2nd Lieutenant
4. Other
Please specify: _____

29. In which Major Command do you presently serve?

1. Strategic Air Command
2. Military Airlift Command
3. Tactical Air Command
4. Other Please specify: _____

30. Do you have prior enlisted experience in any service?

1. Yes
2. No

31. Please indicate the organization/level which best describes your present assignment.

1. Organizational Maintenance Squadron or Aircraft Generation Squadron
2. Field Maintenance Squadron or Equipment Maintenance Squadron
3. Avionics Maintenance Squadron or Component Repair Squadron
4. Deputy Commander for Maintenance Staff
5. Other - Please specify: _____

Have you completed:

32. Lieutenants Professional Development Program?

1. Yes
2. No

33. Squadron Officer School?

1. No
2. Yes, by correspondence
3. Yes, in residence
4. Yes, by both methods

34. Air Command and Staff College?

1. No
2. Yes, by correspondence
3. Yes, by seminar
4. Yes, in residence
5. Yes, by 2 or more methods

35. Any Postgraduate degree?

1. Yes
2. No

36. How many hours per week do you engage in personal study of leadership, history, or military leaders?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

37. How many times per week do you actively influence the behavior of your peers toward the attainment of a shared goal?

1. No times
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

38. How many times per week do you actively influence the behavior of your enlisted subordinates toward the attainment of a shared goal?

1. No times
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

39. How many times per week do you actively influence the behavior of your NCO subordinates toward the attainment of a shared goal?

1. No times
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

40. How many times per week does a superior officer actively influence you to attain a shared goal?

1. No times
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

41. How many weeks per year do you serve Temporary Duty on a job-related deployment or exercise?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

42. How many hours per week do you spend in community-related leadership activities (i.e., scoutmaster, Special Olympics volunteer, base tour guide, etc.)?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

43. How many hours per week do you spend in church-related leadership activities (i.e., lay leadership, fund raising, social event organizing, etc.)?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

44. How many hours per week do you spend in professional organization leadership activities (i.e., club positions, project coordination, etc.)?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

45. How many hours per week do you spend in sports-related leadership activities (i.e., coaching, team leadership/membership, events organizing, etc.)?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

46. How many hours per week do you spend in other Air Force-related leadership activities (i.e., Base Honor Guard, USAFA/AFROTC liaison or flight commander, Junior Officer Council, etc.)?

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

47. Please specify any other leadership activity you regularly use and indicate the number of hours per week that you spend doing it.

Activity: _____

1. less than 1
2. 1-2
3. 3-4
4. 5-6
5. 7-8
6. over 8

THANK YOU FOR COMPLETING PART I OF THE SURVEY

PLEASE GO ON TO PART II

PART II

SAMPLE ITEMS IN EACH BEHAVIOR CATEGORY OF THE MANAGERIAL BEHAVIOR SURVEY

Instructions: This questionnaire is designed to learn more about the way leaders/managers do their jobs. You are asked to describe the behavior of the superior officer with which you work most closely. For example, if you are assigned to a squadron, the officer would probably be your maintenance supervisor. Your answers should be based on your own observations of this officer's behavior, as well as any other reliable information you have about it. However, if you have worked with this officer for less than 6 months, do not fill in the questionnaire. Return all survey parts and your answer sheet in the return envelope, whether or not you have completed them.

The response choices for each behavior item are as follows:

| | |
|---|---|
| D | Don't know |
| NA | Not Applicable |
| 1 | Never/ Not at All |
| 2 | Seldom/ To a Small Extent |
| 3 | Sometimes/ To a Moderate Extent |
| 4 | Usually/ To a great Extent |

Choices 1 through 4 refer to how consistently and extensively the officer takes advantage of opportunities to do the behavior when it is clearly relevant and feasible. The "Not Applicable" answer should be used if the officer does not do the behavior because it is not relevant (or not possible) in his/her managerial position. The "Don't know" answer should be used only if you have not had an opportunity to observe the type of behavior described in the item, and you don't know whether the officer does it or not.

Please be as careful and accurate as you can in your responses. It is important to avoid confusing the different types of managerial behavior. Try to think about each category of behavior separately, and do not allow your answer for one type of behavior to influence your answer for another type. Be especially careful to avoid "halo" bias, where you give all high scores, or the opposite bias where you give all low scores because you dislike the officer.

For each item, we suggest you write the number or the letter of the answer you select on the line provided to the left of the item. Then, when you are done, transfer your answers to the answer sheet provided. Please go on to the next page. Thank you for your assistance.

D Don't know
NA Not Applicable
1 Never/ Not at All
2 Seldom/ To a Small Extent
3 Sometimes/ To a Moderate Extent
4 Usually/ To a Great Extent

INFORMING

_____ 48. He/she passes on to you relevant information obtained in conversations with other people.

CONSULTING AND DELEGATING

_____ 58. He/she asks you for your ideas and suggestions before making an important decision.

PLANNING AND ORGANIZING

_____ 68. He/she plans in detail how to accomplish a major task or project (e.g., identifies the sequence of necessary action steps, then determines when each should be done and who should do it).

PROBLEM SOLVING AND CRISIS MANAGEMENT

_____ 78. He/she gives top priority to solving a serious problem rather than becoming preoccupied with less important matters.

CLARIFYING ROLES AND OBJECTIVES

_____ 88. He/she clearly explains your work role and job responsibilities.

MONITORING OPERATIONS

_____ 98. He/she holds a meeting with you to review how the work is going.

MOTIVATING TASK COMMITMENT

_____ 108. He/she urges you to make a maximum effort in doing the work.

RECOGNIZING AND REWARDING

_____ 118. He/she compliments you on the way you handled an assignment in which you demonstrated unusual creativity, initiative, persistence, or skill.

D Don't know
NA Not Applicable
1 Never/ Not at All
2 Seldom/ To a Small Extent
3 Sometimes/ To a Moderate Extent
4 Usually/ To a Great Extent

SUPPORTING

_____ 128. He/she treats you in a friendly manner (e.g., greets you warmly, is cheerful, courteous, and considerate).

DEVELOPING

_____ 138. He/she tells you when your performance is not up to his/her expectations and shows disappointment.

HARMONIZING AND TEAM BUILDING

_____ 148. He/she talks about the importance of teamwork and cooperation.

REPRESENTING

_____ 158. He/she projects a favorable image for his/her work unit or team at meetings and ceremonial events (e.g., acts with poise and dignity; is charming and tactful; is well informed about the work).

INTERFACING

_____ 168. He/she initiates contacts with people in other work units or organizations who can be a useful source of information, resources, and political support.

THANK YOU FOR COMPLETING PART II OF THE SURVEY



PLEASE GO ON TO PART III

PART III

MANAGERIAL BEHAVIOR IMPORTANCE

Instructions: The purpose of this part is to learn more about the requirements of different managerial jobs. You are asked to consider the job of the superior officer with which you work most closely, and rate the importance of thirteen types of managerial behavior for effective performance of this job. The rating choices are as follows:

1 Not Relevant
2 Slightly Important
3 Moderately Important
4 Very Important
5 Absolutely Essential

_____ 178. INFORMING: disseminating relevant information to subordinates and informing them about decisions, plans, and events that affect their work.

_____ 179. CONSULTING AND DELEGATING: encouraging subordinates to participate in making decisions, and delegating authority and responsibility to individual subordinates.

_____ 180. PLANNING AND ORGANIZING: determining the work unit's objectives and strategies, and determining how to use personnel and resources efficiently to accomplish work unit objectives.

_____ 181. PROBLEM SOLVING AND CRISIS MANAGEMENT: identifying serious work-related problems, quickly but systematically analyzing the cause, then acting decisively to deal with the problem or crisis.

_____ 182. CLARIFYING ROLES AND OBJECTIVES: establishing a clear understanding of job responsibilities, task objectives, and performance expectations for subordinates.

_____ 183. MONITORING OPERATIONS: gathering information about the operations of the work unit, and checking on the progress and quality of the work.

_____ 184. MOTIVATING TASK COMMITMENT: using influence techniques to generate enthusiasm for the work, commitment to task objectives, and compliance with orders and requests.

1 Not Relevant
2 Slightly Important
3 Moderately Important
4 Very Important
5 Absolutely Essential

_____ 185. RECOGNIZING AND REWARDING: praising effective performance by subordinates, showing appreciation for special contributions and achievements, and rewarding effective performance with tangible benefits.

_____ 186. SUPPORTING: acting friendly and supportive, being patient and helpful, and showing consideration for a person's needs and feelings.

_____ 187. DEVELOPING: counseling a subordinate about skill deficiencies or inadequate performance, providing coaching or arranging for skill training to be provided, and providing advice and assistance in a subordinate's professional growth and career development.

_____ 188. HARMONIZING AND TEAM BUILDING: developing teamwork, cooperation, and identification with the work unit among subordinates, and facilitating the constructive resolution of conflicts and disagreements.

_____ 189. REPRESENTING: acquiring necessary resources and support for the work unit, and promoting and defending its interests while serving as a spokesperson, negotiator, lobbyist, or recruiter for it.

_____ 190. INTERFACING: developing contacts and interacting with outsiders and managers of other work units to gather information, improve coordination, and discover how the work unit can adapt better to a changing environment.

Now -- please put a check mark in the left margin next to the four behaviors that are most important for the effective performance of the officer's job.



PLEASE INSURE YOUR ANSWER SHEET IS MARKED PROPERLY AND MAIL ALL MATERIALS PROMPTLY USING THE ENVELOPE PROVIDED
THANK YOU FOR YOUR HELP!

## Appendix B: Other Leadership Activities Tables

TABLE 10

AIR FORCE RELATED LEADERSHIP ACTIVITIES/ADDITIONAL DUTIES

| Specific Activity | Absolute Frequency | Relative Frequency |
|---|---|---|
| Additional Duties (in General) | 28 | 24.8 |
| Base/Squadron/Maintenance Tour | 21 | 18.6 |
| Open House/Air Show Coordinator | 9 | 8.0 |
| AFROTC/USAFA Liaison Officer | 7 | 6.2 |
| Mobility Officer | 4 | 3.5 |
| AFAF Project Officer | 4 | 3.5 |
| Vehicle Control Officer | 4 | 3.5 |
| AFA Membership Drive Officer | 4 | 3.5 |
| Special Projects Officer | 3 | 2.7 |
| Disaster Preparedness Officer | 3 | 2.7 |
| CFC Project Officer | 3 | 2.7 |
| Public Relations/Affairs Officer | 3 | 2.7 |
| Safety Officer | 2 | 1.8 |
| Squadron Historian | 2 | 1.8 |
| Project Warrior Officer | 2 | 1.8 |
| Master Drill Sgt (Marching Band) | 1 | 0.9 |
| Report of Survey Officer | 1 | 0.9 |
| Squadron Tax Officer | 1 | 0.9 |
| Maintenance-CE Liaison Officer | 1 | 0.9 |
| Squadron Athletics Officer | 1 | 0.9 |
| SAC Navigation Bombing--1985 OIC | 1 | 0.9 |
| Base Honor Guard OIC | 1 | 0.9 |
| Official Escort | 1 | 0.9 |
| Dining Out Project Officer | 1 | 0.9 |
| Military Briefings | 1 | 0.9 |
| Squadron Resource Advisor | 1 | 0.9 |
| Squadron Security Manager | 1 | 0.9 |
| Summary Courts Officer | 1 | 0.9 |
| Self-Inspection Manager | 1 | 0.9 |
| | 113 | 100.4* |

*Does not add to 100 percent due to rounding error.

TABLE 11

PROFESSIONAL ORGANIZATION LEADERSHIP ACTIVITIES

| Specific Category | Absolute Frequency | Relative Frequency |
|---|---|---|
| Junior Officer Council/CGOC | 37 | 46.3 |
| AFA Membership/Local Chapter | 8 | 10.0 |
| President Club/Organization | 7 | 8.8 |
| Other Club Elected Officer | 7 | 8.8 |
| Other Club Membership | 7 | 8.8 |
| Project Coordination | 7 | 8.8 |
| Fraternity/Sorority | 2 | 2.5 |
| Maintenance Officer Association | 2 | 2.5 |
| Business and Professional Women | 1 | 1.3 |
| Airlift Association | 1 | 1.3 |
| Society of Logistics Engineers | 1 | 1.3 |
| | 80 | 100.4* |

*Does not add to 100 percent due to rounding error.

TABLE 12

COMMUNITY LEADERSHIP ACTIVITIES

| Specific Category | Absolute Frequency | Relative Frequency |
|---|---|---|
| Boy/Girl Scouting | 20 | 33.9 |
| Special Olympics | 10 | 16.9 |
| Youth Activities | 8 | 13.6 |
| Toastmasters/Speakers Bureau | 5 | 8.5 |
| Other Volunteer Work | 4 | 6.8 |
| Special Projects | 3 | 5.1 |
| Big Brothers/Sisters | 2 | 3.4 |
| Credit Union Executive Committee | 2 | 3.4 |
| Chamber of Commerce Member | 1 | 1.7 |
| PTA Member | 1 | 1.7 |
| Career Day Representative | 1 | 1.7 |
| Amateur Theater Director | 1 | 1.7 |
| Single Parent Group Leader | 1 | 1.7 |
| | 59 | 100.1* |

*Does not add to 100 percent due to rounding error.

TABLE 13

SPORTS LEADERSHIP ACTIVITIES

| Specific Category | Absolute Frequency | Relative Frequency |
|---|---|---|
| Coaching | 25 | 41.0 |
| Team Member | 24 | 39.3 |
| Team Leadership (Captain) | 7 | 11.5 |
| Events Organizing | 4 | 6.6 |
| Umpiring | 1 | 1.6 |
| | 61 | 100.0 |

TABLE 14

CHURCH LEADERSHIP ACTIVITIES

| Specific Category | Absolute Frequency | Relative Frequency |
|---|---|---|
| Lay Minister | 10 | 22.7 |
| Social Events Organizing | 10 | 22.7 |
| Sunday School Teaching | 6 | 13.6 |
| Fellowship/Group Planning | 5 | 11.4 |
| Choir Director | 4 | 9.1 |
| Fund Raising | 3 | 6.8 |
| Sports | 2 | 4.5 |
| Youth Activities | 2 | 4.5 |
| Deacon | 1 | 2.3 |
| Usher | 1 | 2.3 |
| | 44 | 99.9* |

*Does not add to 100 percent due to rounding error.

TABLE 15

OTHER LEADERSHIP ACTIVITIES

| Specific Category | Absolute Frequency | Relative Frequency |
|---|---|---|
| Parenting | 5 | 23.8 |
| Family Reunion Organizing | 3 | 14.3 |
| Aircraft Maintenance Job Itself | 2 | 9.5 |
| AFA CONUS Field Trip Project Officer | 1 | 4.8 |
| Miss Ellsworth Pageant--USA | 1 | 4.8 |
| Interaction with Civilian Leaders | 1 | 4.8 |
| Damaged Aircraft Restoration P.O. | 1 | 4.8 |
| Simply Talking to other officers (superior) and senior NCOs | 1 | 4.8 |
| Member MAJCOM IG Team | 1 | 4.8 |
| Home Management Activities Put to Practice at Work | 1 | 4.8 |
| Extensive Use of Leadership Reaction Courses such as SOS | 1 | 4.8 |
| Out of Career Field Job | 1 | 4.8 |
| Survival Game Play with C02 Guns and Paint Pellets | 1 | 4.8 |
| Personal involvement with 36-2 action gave reason/cause for personal assessment of why I'm in the AF--what I want to accomplish--the importance of integrity, etc.--the need to follow superiors and to support subordinates | 1 | 4.8 |
| | 21 | 100.4* |

*Does not add to 100 percent due to rounding error.

## Appendix C: Comments from Survey Respondents

1. I think the development of leadership within today's AF is basically neglected in favor of "management." Organizationally and academically, the AF is committed to training managers. Just look at all the discussion of various management styles at SOS--and leadership is relegated to discussing "12 O'Clock High." "12 O'Clock High" is fine, but I think we ought to go a lot further than that.

Leadership can be taught, but not by discussing various generic "styles" vs generic "situations." The most important thing in learning to lead is to have a leader to emulate. And, in my experience, they are few and far between. The second most important is to learn to distill the good and bad points from each leadership situation you are exposed to. And thirdly, the AF should put far more emphasis on reading, thinking, and discussing.

I would specifically recommend a semiformal seminar program for junior officers. This program would require reading, but no tests or papers--and no grading. I envision the seminar as meeting every two weeks (or maybe once a month) with assigned reading to be accomplished before the scheduled discussion. The readings would be from military history, biography, and ethics with an emphasis on how and why people handled their given leadership situations. The objective would be to encourage people to think and compare their own reactions, thus fostering the development of their own concrete leadership ideas. The AF would have to back it up by providing some kind of recognition to those who complete the program. Some Project Warrior programs probably already fit this description or are close. Project Warrior is a step in the right direction, and the program I have described would surely fit the objectives of Project Warrior. I would be happy to discuss this further at any time.

[Signed]

2. [I] don't feel enough time is spent training junior officers. [There is] too much crisis management--"Here, you're in charge!"

3. I was active in [various leadership development] activities as an enlisted. Since then, I have coached in youth activities but had to give it up because it conflicted with my job.

4. [Leadership development activities] 19 through 24 are moderately important for some kind of extra duty or activity other than work--[they] provide some kind of demand on the individual's ability to organize (i.e., whether it is

Church/Community, Professional or Other is irrelevant, just that the time and effort demands and challenge is there.)

A vigorous athletic program/activity is a necessity in addition to any other activity.

5. The first thing the Air Force must do is determine if they want leaders or managers. We then must realize and inform our people that just being an officer does not automatically make one a leader. Then we should come to the realization that we all cannot be leaders.

SOS is boring. ACSC seems somewhat removed from reality. The officers I know see both as a necessary evil and square filler for promotion or otherwise. Seems such a waste of time for so many with very little benefit. Leadership is a development process. It is learned and takes time. The Air Force gives us this time to some extent, to self-develop ones own style of leadership. If we desire leaders, we should consider an intensive leadership and development school at certain career points that would be mandatory for all officers. I realize SOS and ACSC does exist, but I was thinking of borrowing modern industries ideas of teaching, making the program a worthwhile and positive value. Updating constantly is a must.

The leadership development is not the best in the Air Force, but not the worst. It does provide some opportunities for some of us. Surveys such as this are definite steps in the right direction.

6. Establish a Limited Duty Officer Program similar to the Navy. Have prior enlisted personnel commissioned at a grade commensurate with their work experience.

Example: LDO in aircraft maintenance:
5 years enlisted--1st Lt.
10 years enlisted--Captain.

7. More emphasis has been placed on the role of manager vice the leader. Just about anyone with common sense can manage--but to lead is another thing. I've been in the Air Force for 12 years and I have observed officers who were not familiar or had not gained the working experience but knew the "jargon/lingo" and were able to "manage." Subordinates see through this readily and doubt their ability to make sound judgements or just plain lead. In many instances the maintenance officer staffs problems without having a working knowledge of the problem. A leader will try to experience the situation--a manager will try to manage it--mostly from a distance. During peacetime we must be managers--in wartime we need leaders. A leader can be a manager--but can a manager be a leader?

I question the female officer's role in the Air Force since women are restricted from combat. One of the primary

ways to gain leadership experience is to be a squadron commander. Women who are selected as commanders will not use this "leadership experience" in combat. They will fulfill a support role stateside. Why not avail these opportunities to personnel who are not restricted to combat?

Leadership is a valuable trait. A lot of money (at the taxpayers expense) is spent in developing managers instead of leaders. Programs such as the Wright-Patt [AFIT] Logistics 261 and 262 courses, and the Aircraft Maintenance Staff Officer Course are a step in the right direction. Exercises such as deployments, cimcells, war operations centers (WOCs) do more toward providing leadership skills than any other source--hands on experience!

8. There is excessive and widespread micro-management in today's Air Force. I've watched this trend develop over the last 7 years, since the emphasis on "Buck Stop" ended.

Today's senior leaders advance not through job accomplishment or developing subordinates' potentials, but by avoiding incidents and covering up errors in their areas of responsibility.

There needs to be a strong push from HQ USAF down to get decision making back down to the lowest practical (which is the most familiar with the situation) level.

9. I am a rated supplement pilot, graduate of AFIT Logistics Management School, presently an OMS Maintenance Supervisor! I haven't attended any PME in residence. SOS and ACSC by correspondence were nearly worthless for leadership development.

It seems to me that leadership development is a hands on learning phenomenon, not an academic one. I have learned more about leadership in my 16 months in maintenance than in the previous 9 years as a flyer.

Take heart, loggies! I find that the broad brush of AFIT has helped make me a more effective leader than many of my peers. The fact that I can see beyond local problems to their systemic causes is a real advantage. (On the other hand, the quantitative stuff I did so well at has gotten limited use!)

To sum it up, I believe leadership development is a matter of taking broadly educated young officers and challenging them in people-intensive career fields such as maintenance.

10. Aircraft maintenance officers <u>do not</u> have a training program after Aircraft Maintenance Officer Course. We are left out for the wolves. We were taught basics and put in the field to do. When we arrive, we learn by experience, asking millions of questions, going through orientations, and even some FAM [Weapons System Familiarization] Courses, some of which are very helpful. I believe maintenance

officers need management experience. What? What do managers do--"Lead or Manage?" What do maintenance officers do?

Flight crew members have training programs to enhance their abilities to fly. Managers are taught how to find and manage problems. What to look for and so on. Maintenance officers do not have any type of OJT once they are in the field. They follow senior NCOs and once they learn, they are so burned out they get out. Prior service people know how to bounce back "some." But what do we do to learn our jobs and do them well?

We need an on going training program. All my supervisors I ever had as an aircraft maintenance supervisor have been too concerned about aircraft maintenance or their careers that teaching subordinates was not accomplished.

We need an on going training program!

11. EXTENSIVE use of Leadership Reaction Courses such as those at SOS.

12. The Strategic Air Command has a special indoctrination program called Aircraft Maintenance Officer Systems Training (AMOST). It is an absolutely great program which gives new maintenance officers a quick education on the specific weapon system and how it is taken care of. This education releases a new maintenance officer's attention from that "lost feeling" about his airplane and allows time and effort to be devoted to better management of the people who maintain the airplanes.

13. I feel like this survey was too limited in scope! It concentrated primarily on your supervisor and not you! Additionally, it does not fully consider the current maintenance officer manning (or lack) and the requirement to place maintenance officers in more demanding jobs.

I have 6 years TAFMCS and am the only maintenance officer assigned to the largest AMS in SAC and this doesn't count the commander. We're authorized 3! I have been a maintenance supervisor since my first duty assignment.

My ROTC preparation did little to influence my leadership skills. My undergraduate degree in psychology did because it taught human relations. ROTC taught almost nothing about management of enlisted personnel which is what this job entails. SOS by correspondence is something you suffer through.

I will complete my masters degree in August. This has helped a little, but trying to get the darn thing in a job like this is extremely difficult.

I have done some outside volunteer work, but had to give it up because of a duty change. I was secretary of the JOC until they changed the meeting time to 1500.

I realize this is probably for your masters in Logistics Systems Management. I really think you need to look at what you really want from this--do you want information on the individual or on the individual's supervisor.

I put my AUTOVON number on front--feel free to call if you have questions about my comments.

[Signed]

14. Military leadership has only one objective that is to win in war. The concept of healthy competition through sports and the helping hands of church and social groups are well founded when the objective is to teach individuals to be team members and/or responsible citizens.

A military leader of any branch should have the ability to take his/her subordinates into a combat environment with a reasonable expectation of returning. The Air Force seems to place more emphasis on the appearance of its personnel and appropriate paperwork than on the physical conditioning and combat readiness of its personnel.

I would like to see every Air Force officer and NCO receive training in infantry weaponry and tactics. This should include the tactical and strategic uses of air power and its effect on the ground troops who ultimately win or lose battles.

15. OTS was not a leadership-developing atmosphere. If anything, the officers there were more often examples of how not to be.

Leadership through correspondence courses is ineffective. In-residence PME other than OTS should be the method.

Most leadership is learned on the job--and from NCOs!

16. Within aircraft maintenance, especially as OIC, Assistant OIC of an AMU, the diversity is continually present as an opportunity to expand one's leadership.

Interacting with a hundred troops on a 2-4 week deployment to Clark AB Philippines, for example, presents a world of challenges. Logistical problems can be expected and worked out; however, contending with severe weather, 12 hour shifts for the troops, the night life outside the gate awaiting the troops, trading a case of beer to the local Filipino wash rack crew to wash one of your F-15s, arranging sheet metal support from the 3rd CRS who care nothing about a deployed aircraft on their base--especially on a late Friday night.

All of these, and more test one's ability to survive. As a lieutenant learning the leadership styles effectively employed by a production supervisor, a commander, or a staff sergeant expeditor is most important in molding a style that can be utilized under varying circumstances. This is what I feel is the best way to learn how to be an effective officer.

17. The Air Force is not selective enough when picking aircraft maintenance officers. Prospective maintenance officers should have some maintenance experience preferably, or at least have an aptitude or interest in things mechanical. Also, 2Lt maintenance officers should be placed in a lengthy hands-on apprenticeship program, particularly if they have no prior aircraft maintenance experience.

I've seen a large number of maintenance officers become paper shuffling bureaucrats because they were expected to lead an organization they couldn't relate to; they subsequently gave up trying.

I would suggest a 1 to 2 year program of actual shop or crew chief experience for all maintenance officers. They should receive 2Lt pay and earn credit towards promotion to 1Lt during this time, but otherwise carry no rank.

Maintenance officers, particularly junior maintenance officers, lack credibility. Only by being more selective and developing more professional technical expertise, can we reverse this trend. [I] also suggest all 4024s be given a weapon system identifier, after proper training and experience, and left in that area for at least 2 tours.

18. Because of my limited (8 months) commissioned service, and because I have not yet had any real management experience, I can't effectively comment. The Air Force has obviously put a great deal of effort into leadership development, and I hope to take advantage of that in the near future.

19. My best leadership development comes from showing up at work everyday. Courses like SOS correspondence (the only one I've worked on so far) do not measure up to job experience in my development. The development attained is not worth the time spent. Don't get me wrong--SOS and other courses are a good experience, and some development comes from taking them. I'm just saying that most young maintenance officers are out in the field spending 12-14 hours per day working, taking aircraft systems courses, and learning by the "sink or swim" method. By the time I get around to reading a point in a development course, I've already learned the lesson the hard way.

20. In my experience, I've perceived with many officers and NCOs what I would term "Leadership by Default." In actuality [it is] "CYA Leadership!" I suggest--tongue in cheek--that the Air Force establish 'Leadership No Fault Malpractice Insurance" (funded by the taxpayers of course).

I'm sure the result would yield tangible benefits; i.e.,--decisiveness; straight forward accountability for actions; firmness when the efficiency and effectiveness of the mission demands it; compassion and practical sensibility

that, in a versatile leader, knows when "the letter of the book" diverges from the spirit or intent.

21. Too much emphasis on post graduate degrees. Many are square-fillers and do not really apply. Job performance, not willingness or square-filling degrees marks a leader. And, yes I have my masters.

22. Personal involvement with 36-2 action gave reason/ cause for personal assessment of why I'm in the AF; what I want to accomplish; the importance of integrity, etc.; the need to follow superiors and to support subordinates.

23. SOS should be a once only program. There is too much wasted time and money when persons who have completed the correspondence course then go TDY for in-residence school. The same is true for other schools that have both correspondence/in-residence programs.

24. The SOS course would be more interesting and easier to accomplish if it were not so redundant of OTS.

25. I think PME is disgraceful! Wonderful in intent, but the way ATC runs it . . . no real growth. Learn/memorize the "way"--never mind the rationale. It could be so meaningful. . .

26. I feel that there is not enough initial instruction for leadership skills. I have just recently attended the Lieutenant's Professional Development Seminar and I've already been in the Air Force 26 months. I feel that the sooner you get some leadership training the sooner you'll get on the right track. Also I feel that more space should be made for people to attend SOS in residence.

27. Generally, very poor! Our young lieutenants come in with virtually no training in how to manage people, relate with superiors, and how to function within the maintenance organization. Also, training for their roles as maintenance officers for a particular type of aircraft (i.e., aircraft systems knowledge) is virtually non-existent. Our young officers come on board to an operational unit with a totally empty clue bag. Yet senior officers expect them to make intelligent decisions regarding maintenance. A totally unrealistic course of events. Our young maintenance officers need to learn how to manage a maintenance organization such as an AMU not only in regard to paperwork and aircraft forms, but people as well. The management of an enlisted force needs to be learned from senior NCOs not majors or lieutenant colonels, out of a standard Air Force book. More technical training should be accomplished when the individual receives orders for a special type of aircraft.

28. Leadership and development in TAC is poor. You develop alone or step aside for others. Experience, knowledge (expertise), and confidence are the keys. Therefore, lieutenants and junior captains cannot pretend to be "leaders," they must evolve into leaders in job-related avenues.

29. Leadership can be developed. However, much "skill" is actually innate behavior; some are blessed, others are not. Some AFSCs, i.e. 40XX require more of the unteachable/not learnable talent. People are assigned an AFSC based on Air Force needs (numbers) with some attention paid to educational background. It is difficult to assess a person's personality relevant to leadership. Those that don't "fit in" [to the aircraft maintenance specialty] can be allowed cross training or otherwise sort themselves out. Leadership roles simply are not for everyone. No suggestions are offered here; this simply seems to be a fact of life from my point of view.

30. I'm presently on my second year of a three year rated supplement tour in maintenance after completing an AFIT masters degree in Acquisition Logistics Management. I've been OIC of a C-141 flightline branch, OMS maintenance supervisor, and am currently the maintenance supervisor of a 700 plus person FMS. Thus, the superior officer that I deal with the most is the squadron commander, a lieutenant colonel. The maintenance career field is probably one of the best, if not the best, career field to develop strong leadership qualities in officers. This is mainly because one is presented with virtually unlimited opportunities to lead on a daily basis. Developing leadership potential is closely related to initiative in my opinion. If people don't want to improve or develop as leaders, they probably won't regardless of the number of force-fed programs or challenges that the Air Force or their supervisors present them with.

31. 1. Leadership development [is] very dependent upon immediate supervisor's leadership style.

2. Leadership Reaction Course (LRC) at OTS and Project X at SOS [are] excellent for developing, observing, and practicing different types of leadership styles

3. SOS has been the most influential AF forum on developing my leadership style--so many good officers there--peers and supervisors!

4. I would like to see a 2-3 day exercise added on to OTS and SOS. This exercise would be conducted after the LRC and Project X. The exercise would be an extension of the LRC and Project X. It would entail placing an entire flight or section in the woods. Each section would then have an objective to accomplish. Sections would be divided into friendly and hostile forces. This exercise would reinforce

leadership techniques/styles taught, and illustrate the importance of teamwork.

32. In the SOS course there needs to be more management. There should also be more information on our allies. As far as new programs there needs to be special programs and seminars set up specifically for young maintenance officers.

33. Continue the leadership versus management debate. Emphasize leadership over management in all PME (including intermediate and senior service schools).

Hopefully the above will encourage OER writers to take a hard look at an officer's leadership ability when evaluating him/her. The requirement for leadership, admittedly, varies with an officer's AFSC; but for aircraft maintenance officers I feel it is an extremely important quality. I have met senior captains, majors, lieutenant colonels, and even colonels, who had little to no leadership ability. How they managed to advance in rank without this being noted is beyond me.

34. Thoughts! Personal experience and numerous discussions with peers convince me that junior officer PME is nonsense. There is no substitute for experience and by extension the sharing of experience. Seminars and extensive use of Project X or Log Man X type exercises where people have to think through their decisions are much more valuable and lasting in their effect. PME square filling is pointless and counter-productive. In addition, the qualifications for participation are meaningless. Much the same as the Company Grade Officer Council is not representative of all company grade officers. Flightline related AFSC junior officers don't have time for these activities (if they want to keep their positions!!).

35. I think the Air Force spends too much time pushing for programs that don't develop leadership. You don't learn to be a leader from a book--you learn by being on the job. Yet, off duty education and correspondence courses take away time that could be spent at work--or relaxing so you don't get burnt out and become ineffective.

36. All the present programs contribute to developing leadership, and I feel they all have a place in the officer's career. However, their individual usefulness varies with the officer and his/her duties, and only implementation of the theory under actual duty conditions will enable the officer to determine their effectiveness and usefulness to him/her.

The effectiveness of SOS could be greatly improved by making it available <u>in-residence</u> to all officers in the future.

37. The most effective way to master the communication and human relations skills needed to lead a group of people is through practical experience.

Another key ingredient to leadership development is emulating a successful superior officer. Follow their guidance and example.

38. Recommend a mandatory quarterly performance counseling session for all company grade officers. Each supervisor would talk to each of his subordinate officers about job performance and improvement areas. The only documentation would be whether th· interview was done or not. Things discussed would not be recorded. The OER does not communicate to the subordinate how he is really doing. Another communication vehicle is needed.

39. PME for all officers should be in-residence only.

Junior officers need command experience immediately (similar to Marine Corps officers.)

Leadership is only developed experientially but needs an initial foundation academically. The USAFA should have been a much richer environment in both respects.

Square filling and indorsement chasing promotes individual self-benefit at the expense of the Air Force. Teach men how to be unselfish and look to making the Air Force better and concentrate on service to our nation and national defense.

40. ROTC is too management oriented. Our job in the Air Force is to lead--not manage. If a warrior-leader area could be incorporated into the ROTC curriculum, the effects would be tremendous. As an Air Force officer, my job is primarily to lead. A good leader is a good manager but a good manager is not always a good leader.

"You can't manage a man to his death."

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# VITA

Captain Michael A. Morabito was born on 1 October 1956 in Wiesbaden, West Germany. He graduated with Honors from Kecoughtan High School, Hampton, Virginia in 1974 and continued his studies at Christopher Newport College of the College of William and Mary, Virginia. Captain Morabito graduated Magna Cum Laude in 1979 with a Bachelor of Science degree in both Business Administration and Psychology. He entered Officer Training School in November 1980 and was commissioned in February 1981. After commissioning, he was assigned to Chanute AFB, Illinois for initial training as an aircraft maintenance officer. In August 1981, Captain Morabito reported to the 436th Military Airlift Wing (MAC) at Dover AFB where he worked in the Organizational Maintenance Squadron as a C-5A flightline maintenance officer, Section "B" OIC, Assistant Maintenance Supervisor, and OIC Transient/Enroute Maintenance Branch. In June 1984, Captain Morabito entered the Graduate Maintenance Management program, School of Systems and Logistics, AFIT. He was awarded a Master of Science Degree in Logistics Management in September 1985. Captain Morabito has a follow-on assignment to the 437th Military Airlift Wing (MAC), Charleston AFB, South Carolina.

Permanent address: 328 Beauregard Heights

Hampton, Virginia 23669

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A random sample of 320 U.S. Air Force aircraft maintenance officers (AMOs) was surveyed using the updated version of Yukl's Managerial Behavior Survey (MBS), to measure leader behavior of the AMO's superior officer, and other scales focusing on the AMO's perception of his/her own leadership development. Specific development methods used by AMOs and the perceived importance of each were explored. Furthermore, suggestions were collected on ways to improve development methods available to them in the Air Force. Leadership development was correlated with the superior's leader behavior and with demographic and organizational variables. The personal factor of rank was found to be associated with leadership development. Participation in eight of nineteen leadership activities correlated significantly with the degree of importance the AMO placed on the activities. Analysis of the MBS results indicated certain categories of superior officer leader behavior were significantly associated with the perceived leadership development of the AMO. Comments on improvements to the development methods available to junior AMOs were grouped and examined for common themes.